Biofuels in the European Union

Analysis of the Development of the Common Biofuels Policy

Miriam Søgnen Haugsbø

Master's Thesis
Department of Political Science

UNIVERSITY OF OSLO

23 of May 2012

2012

Biofuels in the European Union

Miriam Søgnen Haugsbø

http://www.duo.uio.no/

Print: Norwegian Agricultural Economics Research Institute (NILF), Oslo

Abstract

Biofuels are increasingly being promoted as substitute fuels in the transport sector. Many countries are establishing support measures for the production and use of such fuels, in order to boost the development of the industry. Biofuels are expected to become increasingly competitive to conventional fuels, and to increase their share of the market, in the coming years. This development, where the production and consumption of these fuel types is expanded, is mainly driven by public policies, expressed through biofuels policy mandates or renewable energy goals. In 2009 the European Union adopted the Renewable Energy Directive. This directive contains, among other things, a goal of increasing the share of renewable energy in the transport sector to 10% by 2020. This proportion shall mainly be accomplished through the use of biofuels. The goal from the Renewable Energy Directive is ambitious, and the implementation of it is likely to have severe influence on the world's biofuels scene, as the majority of crops for the production will have to be imported. Biofuels are promoted for three main reasons in the European Union. First of all they are promoted as a renewable energy source, since these fuels are regarded as carbon neutral, they do not increase the amount of green-house gases in the atmosphere. Biofuels are also promoted as an alternative energy source, as they constitute a measure to reduce the Community's energy dependence. In addition, biofuels are seen as an innovative energy source, whose development contributes to the development of rural areas. At the same time are these three biofuels assumptions questioned by a growing critical literature that surrounds the policy.

This thesis describes the development of the biofuels policy of the European Union. The policy area of biofuels was established more or less a direct consequence of the energy situation created by the oil crisis in the 1970s. Over the years the policy area develops from a Member State to a Community level competence, resulting in a common policy through the adoption of the Renewable Energy Directive in 2009. The development has also been of a policy field that is becoming increasingly complex as new concerns are introduced to the policy. The institutional characteristics of the EU system are influencing the development of the policy. Both regarding the placement of power either on Member State level, or at Community level, and regarding the framing of the policy in connection to the three policy areas to which it relates. The story of the development of the EU's biofuels policy is also one where the influence from the surrounding context is important.

Preface

I am finally there. My thesis is to be turned in, marking the end of my student career. It has been a long, demanding and frustrating journey, but also a very giving and fortunate one. There are many people who I wish to thank. First of all, thanks to my two supervisors, Frode Veggeland and John Bryden. Your helpful comments and encouraging words have been irreplaceable through this time. Also, thanks to NILF for providing me with a scholarship and a good professional and social environment while writing this thesis. It is much appreciated.

Thanks to Trond Bendiksen, Benedicte S. Bendiksen and Kim Runar Søgnen Haugsbø for proof reading! It is thanks to you that the final result is understandable. Thanks to the other students at NILF – Eline, Bente, Bianca, Stine and Martin. It has been comforting to write alongside all of you. Thanks to my roommates Therese Senneseth and Linn Cathrin Steinskog. You have been invaluable though this process and you are greatly appreciated. Thanks also to my loving family and to my great friends!

Oslo, May 2012

Miriam Søgnen Haugsbø

Contents

1 Introduction

Support measures for biofuels are established in many countries in order to boost the production of such fuel types, as they are regarded as preferable compared to conventional fuel types. Biofuels are expected to increase their share of the market in the coming years, and to become increasingly competitive with conventional fuels. The expansion of the production and consumption of these fuel types is mainly driven by policy mandates and renewable energy goals (OECDE-FAO 2011). The biofuels for transport are first of all promoted as a *renewable* energy source, as these fuels are regarded as carbon neutral. Biofuels are also promoted as an *alternative* energy source, referring to the fact that fossil fuels are running out, and the world needs to obtain its energy from other sources. Biofuels are in addition seen as an *innovative* energy source whose development contributes to the development of rural regions. These three elements are questioned by a growing critical literature that surrounds the policy intending to promote biofuels. The Renewable Energy Directive of the European Union (EU) from 2009 is an example of such a governmental policy tool, seeking to promote biofuels for transport. The directive sets among other things a target of 10% renewable energy in the transport sector by 2020. This target shall mainly be provided from biofuels.

The importance of public policies for the development of the biofuels industry makes a policy study of the development up until the current regulation valuable. More generally, the process that this thesis treats is an example of policy innovation, as a new policy area is born. It is also an example of the European integration process. An illustration of how the EU develops an ever closer cooperation in a policy area, eventually establishing a common EU policy.

1.1 Research Question

How has the biofuels policy of the EU developed, and how can these developments be explained using a broad institutional approach?

This thesis accounts for the development of the common EU biofuels policy. The data is provided from official EU documents, and the findings are interpreted from a broad institutional approach. The main explaining variable for the development is expected to be found in the institutional setting at the EU level. Hence, the characteristics of the system, and its context, will be emphasized.

1.2 Biofuels Policies in the EU

Biofuels is a recent area of commitment for the EU. While the USA and Brazil stated their biofuels programmes already in the first half of the 1970s, is was not an issue in the EU before ten years later. The first successful European biodiesel production was carried out in a pilot plant in Austria in 1985, and from 1992 biodiesel has been produced on an industrial scale in Europe. In the 2000s the production reached new heights because of ambitious public policies to promote these fuel types. The EU is today the leading biodiesel producer in the world (Pahl 2005: 83-4).

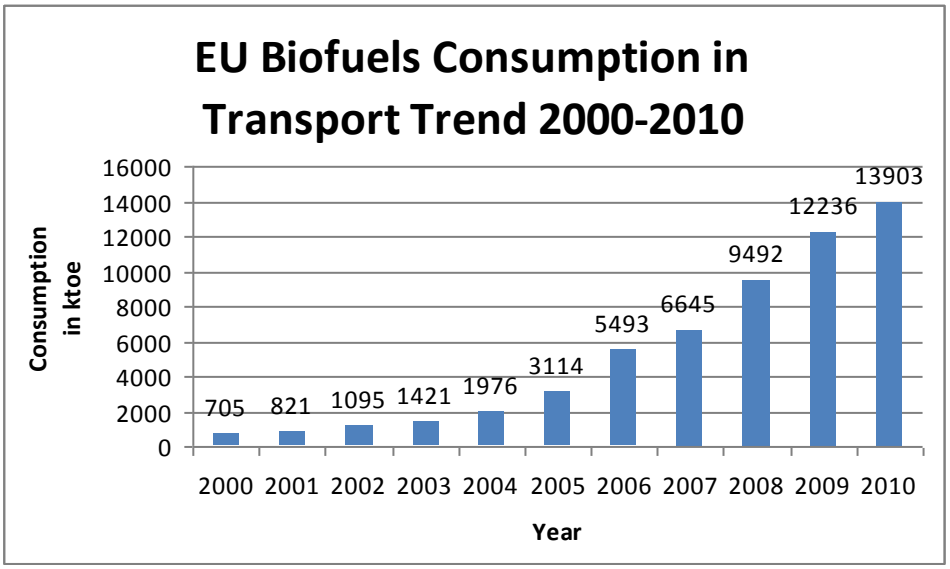

Figure 1: EU biofuels consumption in transport trend 2000-2010 in ktoe[1] (adapted from Eur-Observer 2011: 74).

The introduction of biofuels on the fuel market depends on their ability to be competitive with the conventional fuel types. The price on biodiesel and ethanol is expected to increase to a lower extent than the price on crude oil in the near future, and hence the biofuels will become more competitive. The reason for this increased competitiveness is the increased global production and the technological innovations leading to a more effective production process. This development is driven by public policies where renewable energy goals and production mandates are central. A central component of the EU biofuels policies are blending mandates, where a target for the proportion of biofuels on the Member States' national markets is set. The compliance with these targets have up until now been absent, and the probability for compliance with the target for 2020 is also questioned (OECD-FAO 2011: 80).

[1] Kilotonne of oil equivalent (ktoe) is the amount of energy released when burning one tonne of crude oil.

1.3 The Institutional Approach

This thesis takes a broad institutional approach to the study of the development of the biofuels policy of the EU. A core assumption within this approach is that one should seek knowledge about the institutional framework in order to understand and explain policy outcomes (Peters 2005: 164). Pierson (1996: 158) challenges the hegemony of the traditional European integration theories, in explaining the European integration process, and applies institutionalism instead. The argument of Pierson (1996) is that through the integration process, the EU governmental structure has become institutionalized, and are increasing its scope for own actions and initiatives. The Member States are still regarded as important actors at the EU level, and in the development of new policy, but their actions are seriously constrained by the institutions of the Community, who have taken on a life of their own (Pierson 1996: 158). Egeberg (2004: 13) also views the EU as highly institutionalized, and outlines a set of organizational criteria in order to explain the institutions impact on policy. The institutions channel conflict and cooperation in different ways related to their organizational features. The EU level institutions are based on different sets of dividing lines that steer the focus and attention inside the institution.

1.4 Biologically Based Fuels

Biofuels are energy sources derived from biological materials or biomass, and the combustion of these types of fuels is regarded as carbon neutral. Creating the raw material absorbs carbon dioxide, and using those releases an equivalent amount. The emissions from these energy sources belong in the natural circulation, because the carbon dioxide stored in biological material would eventually have been released anyhow, if not through human energy exploitation then through decomposition in nature (Scragg 2009: 167).

Biomass has always been exploited as an energy source by human beings, and can be exploited through different processes for energy generation. First, and most widespread, the biomass can be used for the heating of buildings and to generate electricity. This can be done through the direct combustion in fires and stoves in private homes for heating purposes, through more advanced pellets burning systems in the heating of larger buildings, or as the energy source in an electricity production plant. A second area of use for the biofuels is through co-firing, where the biomass is burned together with coal in power stations, and in

this way reducing the overall green-house gas emissions from the power station. Thirdly, the biomass can be exploited as a transport fuel. Through different chemical processes, the biomass can be converted into biofuels in gaseous or liquid states that can be used as transport fuels (Scragg 2009: 74-6).

1.4.1 Historical Account

The idea of using biologically based fuels for transport is as old as the motor vehicle industry itself. The early engines where originally designed to be driven by a great variety of fuels, among them alcohol and plant oil based fuels (Olah, Goeppert and Prakash 2006: 177). Henry Ford, the motor vehicle pioneer, called biologically based fuels for transport "*the fuels for the future"* (Scragg 2009: 107). During the first half of the 20th century, there was a great interest in the development of biologically based fuels. This was especially true in European countries, as this part of the world lacked their own petroleum reserves. Therefore these countries had a greater incentive for the development of other sources of energy in order to reduce their energy dependence. Furthermore, as many European countries had colonies in tropical areas, they had access to natural resources and land areas with low cost production potential (Pahl 2005): 26-7).

Nevertheless fossil fuels soon gained dominance as the energy source of motor vehicles. This was due to the fact that by the beginning of the 20th century these fuel sources had become considerably cheaper to access, produce and supply to the public compared to biologically based fuels (Olah et.al 2006: 177). During the World Wars, the normal supplies of fossil fuels were disrupted by the actions of war, and biologically based fuels were used as emergency substitutes. However, after the Second World War, the world society was flooded with cheap petrol, and the biological fuels industry was to a large extent forgotten. The hegemony of the fossil fuels continued without question until the 1970s and the turbulences in the oil supply of this decade (Pahl 2005: 26-7).

The 1970s oil crises was a consequence of the Yom Kippur War of 1973 and the Iranian revolution in 1979. The Organization for the Oil Exporting Countries (OPEC) organized an oil embargo against the West and the USA for choosing sides in these conflicts. As a result of the embargo energy prices inflated enormously and lead an economic recession (Pahl 2005: 27). These two experiences had showed beyond doubt how dependent the Western countries had made themselves on import of oil. The way of life one knew in these nations at the time

was in fact threatened by the insecurity in the oil market. This lead to a revival of the interest in biologically based fuels in the West (Pahl 2005: 28).

1.4.2 Current Biofuels Production and Use

Today's liquid biofuels can without problems be used in small proponents with conventional fuels in normal vehicles. This is related to the belief in biologically based fuels from the pioneers in the automobile industry, and to the continuous interest in these fuels through history (Scragg 2009: 136). The most common biofuels today are ethanol and biodiesel. Ethanol accounts for more than three quarters of the current biofuel use. The majority of it is produced in the USA and Brazil, while the European countries are the leading biodiesel producers in the world (World Watch Institute 2007: 3-7).

Ethanol

Ethanol is derived from sugar crops such as sugar cane and sugar beet, or starch crops such as maize or wheat. Through different processes these crops are transformed into ethanol, which can be used as a fuel in a petrol engine (Scragg 2009: 109). Sugar cane is the most significant biofuels crop. The plant is currently the lowest cost crop available for biofuel production, as it contains a large amount of easily accessible sugar. Brazil accounts for the majority of the ethanol produced from sugar cane. Ethanol from sugar beet is mainly produced in Europe. This plant gives generally good yields of energy in temperate areas, but the total energy yield is low compared to sugar cane production in tropical areas. The crop is more energy and chemical intensive, as the beet must be processed in order to access the sugar. Maize is the most important biofuels source among the starch crops. This is mainly due to the plant's dominance in the USA. Maize is a land intensive crop, and although the USA and Brazil produce comparable amounts of ethanol, the maize based American ethanol needs almost twice as large a land area as the Brazilian ethanol. In addition the starch also requires a more complicated process before it can be converted into liquid fuels. It must first be converted into sugar and then in a second process to alcohol (World Watch Institute 2007: 25-8). The Brazilian ethanol is the cheapest product among the different types of ethanol that is available on the world market. This is related to the production process, and the growth conditions (The Economist 2005).

Biodiesel

Biodiesel is derived from plants that store their energy in oil-seeds, e.g. rape seed, soy bean and palm oil (Scragg 2009: 137). The energy yield per hectare in temperate regions is generally lower for oil seeds compared to starch and sugar crops, but these products normally require less processing, and their overall energy balance is more favourable in the long run than for ethanol products. Rapeseed is the most important feedstock for biodiesel in Europe. It gives the highest net energy yield per hectare of the oil-seed crops, when grown in the temperate parts of the world. Soybean is the dominant oil-seed plant on a world basis, but only a very small portion is used as biofuels for transport. Soybeans generate a relatively low energy yield per hectare compared to other oilseed crops. Still the plant is increasingly being used as a feedstock for biofuels. This is related to the crops occurrence and availability, and not to its suitability as a crop for transport fuels. Palm oil is an attractive source of biofuels production, because the net energy yield per hectare is very high. The majority of the palm oil is produced for food consumption, but an increase in the demand for palm oil for the production of biodiesel is expected, especially due to forecasted increase in the import of palm oil to Europe (World Watch Institute 2007: 30-33).

1.5 Disposition

This chapter has accounted for the research question, the case; biofuels in the EU, the theoretical approach and the technical sides to biofuels for transport. The rest of the thesis is structured as follows. In chapter two the EU institutional setting and the characteristics of biofuels as an EU policy field, are described more closely. In chapter three the methodological and theoretical approach of the study is accounted for. Chapter four constitutes the analysis chapter, where the developments in the EU biofuels policy are interpreted using a broad institutional approach. Chapter five holds an extensive overview of the main conclusions, as this thesis does not contain a separate analysis part, but mixes it with the empirical account.

2 The Case: Biofuels in the EU

This thesis investigates the development of the EU biofuels policy. The initial steps were made through a directive on crude oil savings seeking to protect biologically based fuels from discrimination in the market from 1985, and the current policy is provided for in the Renewable Energy Directive in 2009, where the Member States are obliged to ensure a certain amount of biofuels on their national markets. The EU itself has also gone through important changes during this period. The European integration process has advanced a series of treaties, and the Community level is provided with competence on almost every policy area (Nugent 2010). This thesis takes an institutional approach to explain the development of the EU biofuels policy. The institutional setting of the EU is regarded as the most important explanatory factor for the policy development within this approach. This chapter accounts for the features of the EU system and later for the features of biofuels as a policy field within this system.

2.1 Features of the EU System

Throughout history, the different EU level institutions have been influencing the development of the biofuels policy. The outcome in policy has been proved to be dependent on which concerns that are advocated in the policy process, and to which institution the most power is provided.

2.1.1 The EU Institutions

The European Union's political system is unique in the world, because of the mixture of intergovernmental and supranational structures present in the governmental structure (Kerremans 1996: 224). The system can therefore be difficult to comprehend, as the institutions do not always follow the same rules as the corresponding institutions on national level. Further the institutional design of the EU level changes through the treaty amendments.

The European Commission

The European Commission (The Commission) is composed of 27 commissioners, one for each Member State. Each commissioner is supplied with their own portfolio e.g. Environment

or Energy, but the final decisions are made by the college of commissioners. The commissioners are nominated nationally, but they are to be independent from national interests once they are appointed members of the college (Nugent 2010: 110). The power resources of the Commission are manifold. The initiative power places the Commission at the centre of the policy making process. The other branches of government lack this power and have to wait for the Commission's initiative. Further, the Commission is regarded as neutral because of its organizational characteristics. The Commission is also seen as a valuable information source at the European Level. Furthermore small Member States look to the Commission for leadership and protection when placed before other more powerful Member States (Nugent 2010: 121).

The Commission is first and foremost a developer of policies and legislation, particularly on the subject of specific measures that will advance the development of the European Union. The Commission's powers, when performing this task, depend on the other European Union level institution's power. The trend shows that the Commission's powers have been declining through the last treaties of the European Union. This decrease in power is a consequence of a series of changes in the European Union institutional setting. Among other reasons there is no longer a need for the Commission to play the role as a "policy pioneer" anymore, as the Community is well consolidated. Further, the increase in power resting with the European Parliament and the European Council has resulted in a weaker Commission. Still the Commission has access to a wide range of mechanisms to influence European Union policy, as described in the previous paragraph, and this institution's influence on the policy development should therefore be expected to be considerable (Nugent 2010: 122-36).

The Council of the European Union

The Council of the European Union (the Council) is the principal meeting place for the national governments at EU level. The Ministerial meetings are the most important part of the Council machinery. Further, there are the Permanent Representatives, the Committees and working parties and the General Secretariat that make out the lower parts of the Council hierarchy. The Council prefers to make decisions unanimously, believing that this is best for the development of the Community. The most important function of the Council is its role as a legislative and policy decision maker. This function is shared with the Commission and the Parliament when the Community method is applied. Through this mode of decision making

the Council depends on the Commission to initiate policy through proposals, and it shares the legislative role with the European Parliament through the co-decision procedure. Through the development of the European Union in the recent decades the Council has expanded its scope for influence, as there today is hardly any policy area that is not covered by EU law. On the other hand, the Council's relative power compared to the other EU institutions has decreased. First, the European Council has increased its power over the same period, and this has continuously been taken from The Council's competence. Second, the European Parliament has strengthened its role as a legislative power (Nugent 2010: 139-55).

The European Parliament

The European Parliament (the Parliament) does not have as strong powers as national parliaments, recent changes have however supplied the Parliament with a central role in the EU policy making process (Nugent 2010: 179). The Members of the European Parliament are recruited through direct elections based on political party membership. Eight political groupings inside the Parliament, serve as the basis of organisation (Nugent 2010: 192-9).

The European Parliament's powers are related to the legislative process, the budgetary process and to the supervision of the executive branch, similar to every national parliament. The European Parliament performs its role as a legislator through different processes. Sometimes the Commission floats its ideas for legislation before the Parliament and the two debate the policy initiative at an early stage. The Parliament may also initiate own proposals for legislation through different processes, and also through various measures in the budgetary process. These will serve as input to the Commission's annual legislative programme and they may influence legislation. The most important channel for influence that the European Parliament has is through giving its opinion on suggested legislation from the Commission. This consultation can be carried out through different procedures providing the Parliament with different amounts of influence. The choice in procedure depends on the nature of the matter at hand (Nugent 2010: 179-83).

The European Parliament also has three significant weaknesses as regards its relative power over legislation in the EU governmental structure. Firstly, the European Parliament shares the legislative role in the EU with the Council. The power between them is dependent on the decision procedure chosen. Secondly, the Council has the ability to make preliminary decisions before the Parliament has made their decision, and the Parliament's influence is in

this way reduced. Thirdly the Commission possess powers over legislation that are technical or urgent (Nugent 2010: 183-184).

The European Economic and Social Committee

The Treaty of Rome established the European Economic and Social Committee (the EESC). The decision was based on the view that the special interests needed a forum to express their interests in the Community. The representatives are divided into three groups; employers, employees and various interests. The last group is dominated by representatives from among others, the agricultural sector and environmental organizations (Nugent 2010: 227-8). The Committee has an advisory role in the government system, and its influence is limited, mainly due to its unclear role and the question of its representativeness (Nugent 2010: 231).

The Committee of the Regions

The Committee of the Regions (the CoR) was established as a result of the increasing importance of the regional dimension of the Community's affairs. There are great differences between the geographical areas in the Community when it comes to wealth and income, and the Community is increasing its ambitions to compensate for this. The members of the CoR are all elected representatives of subnational levels of government, and the members are organized in political groups within. The CoR has an advisory role in the system, and the Committee's influence is even more constrained than the EESC's (Nugent 2010: 231-233).

Other Actors on EU Level

The European Council does not have a legislative role in the EU system, but it holds a great deal of power in the Community governmental structure. The institution was established as a reaction to the EU's lack of adaptability, and poor response to new challenges of the Community. The Council has a broad focus, which have led to an unclear role in the EU system, and resulted in a situation where the European Council continuously has increased its power, compared to the other institutions since its initiation (Nugent 2010: 171-8). These are also considerable lobby interests present at the EU level. The three areas that biofuels connect to; energy, environment and agriculture and rural development, are all characterized by strong lobbyist groups. These interests will try to influence the policy through formal and informal channels, and try to steer the policy in the desired direction (Andersen and Eliassen 2006: 44).

2.1.2 The EU Policy Process

The Community method is in use for the adoption of legislative acts in the EU system. This system includes the Commission, the Parliament and the Council. The initiative structure was one where "the Commission proposes, the Parliament advises and the Council decides." Two important developments have occurred over the years. The Parliament has increased its power, and the Council takes decisions increasingly based on Qualified Majority Voting (QMV) (Nugent 2010: 294-5).

The Legislative procedures

Today there are three different legislative procedures in use in the EU government system; the consultation procedure, the ordinary procedure and the consent procedure[2]. The ordinary procedure is the most used, and the other two are referred to as special legislative procedures, only applicable in certain situations. Prior to the Lisbon Treaty there was a fourth legislative procedure; the cooperation procedure (Nugent 2010: 308-310). This thesis investigates a process that stretches back to the beginning of the 1980s, and up until the adoption of the Renewable Energy Directive in 2009. During this time period there have been considerable changes regarding the legislative procedures in use, and this influences the relative power of the EU institutions.-

Prior to the Single European Act (SEA), the consultation procedure was the only procedure for the adoption of legislation. This is a single reading procedure where the Council is the sole legislator, and where the Parliament is merely a consultative body. When a Commission proposal is published, it is supplied to the Council, the Parliament, and if the policy area implies, to the EESC and the CoR for their opinions. The Parliament is the most influential of the consultative bodies. The Parliament's power in this policy process is related to the fact that the procedure requires the Parliament's opinion before the final decision can be taken on the matter. Still the Council does not have to take the Parliament's opinion into consideration, the proposal can be changed after the Parliament has made its opinion on it, and the Council does at times make their decision 'subject to Parliament's opinion' even before the opinion has been submitted. The Council acts normally unanimously in this procedure, and if

[2] The ordinary procedure is called 'co-decision', and the consent procedure is called 'assent' prior to the Lisbon Treaty, in this thesis the most recent terms are used when referring to these procedures.

agreement cannot be made the proposal is sent back to the Council machinery or to the Commission for devising (Nugent 2010: 310-14).

Through the SEA the cooperation and consent procedures were adopted. The consent procedure is used when the Community is adopting e.g. international agreements or regarding Community enlargements. The procedure is a single stage procedure, and the proposal has to be approved by both the Council and the Parliament, but the Parliament does not have the right to amend the proposal (Nugent 2010: 319). The cooperation procedure was established in order to increase the efficiency of the decision-making process, and also because it was necessary to give the Parliament more power, because of criticism of 'democratic deficits'. The cooperation procedure introduced a second reading for the Parliament, increasing its influence, but without giving it the right of veto. The ordinary procedure is based upon this procedure, and goes even further in the allocation of power in the Parliament's direction, supplying it with the right to veto the Council. Since the Maastricht Treaty the scope of the procedure has evolved, and this procedure is today applied for almost all policy areas (Nugent 2010: 315).

The procedure includes as much as three readings, and encourages the EU institutions to engage in inter-institutional bargaining. The official Commission proposal is supplied to the Council, the Parliament, the EESC and the CoR, the two latter only if the policy area in question suggests it. If the Parliament and the Council do not reach an agreement, the Council, taking into consideration the Parliament's opinion, adopts a common position, which is supplied to the Parliament for a second reading. If the Parliament agrees, the common position is approved, and the Council can adopt it as a legal act. If the Parliament does not agree, it can either reject the common position, acting by an absolute majority, or amend the proposal and send it back to the Council. It the Council cannot accept these changes, a third stage is initiated. At this stage the proposal is referred to a conciliation committee, where central actors from the different institutions meet. If the committee agrees on a joint text, this is supplied to the Parliament and the Council for final decision, if an agreement cannot be reached the proposal falls, but this hardly ever happens (Nugent 2010: 315-19).

Policy Areas Related to Biofuels

The Renewable Energy Directive advocates for a biofuels policy, based on three different arguments; the improvement of energy security, the reduction in emissions of green-house

gases and innovation in the agricultural sector and rural development (The European Parliament and Council 2009a: 16). Hence, the development of the common biofuels policy should be expected to be dependent on the policy areas of energy, environment and agriculture and rural development. These policy areas are connected to the EU level to different extents, both regarding the extent and the nature of the involvement (Nugent 2010: 282-3).

The energy policy is the least developed at EU level of the three biofuels related policy areas. The energy field is characterized by a shared responsibility between the national and the Community level, and the cooperation relies heavily relied on interstate relationships (Nugent 2010: 283-4). The lack of a strong common energy policy is related to the enormous differences between the Member States when it comes to import dependence and energy mix (Birchfield 2011: 235). The relationship between the EU institutions regarding energy policy is generally one where the Commission is the advocate for progress, and where the Council "puts the brakes on, or otherwise limits, the ambitious of a coherent, common approach to energy policies (…)" (Birchfield 2011: 246-7). The Parliament's approach to energy policy depends on the relationship with the Council. Generally though, the Parliament's green color as regards political parties is also valid for energy policy. (Birchfield 2001: 254).

The EU Environmental Policy was established through the SEA in 1986. The environmental concerns had been important in the Community political debates since the late 1970s, but through the SEA the informal status of EU environmental policy was ended (Nugent 2010: 307). The environmental policies of the EU are characterized by a shared competence between the national and Community level, but the policy area is at the same time one where the policy relies heavily on legal regulation (Nugent 2010: 284). The EU is today known as one of the driving forces for the development of global policies related to the environment, with ambitious policies also regarding domestic targets (Lenshow 2005: 323). Also inside the Community the ambitions regarding the environment are extensive. The Commission is eager to perform its initiation role related to environmental policies. In the Council the environmental ministers are generally eager to promote Community environmental policies, as they at the European level are not constrained by conflicting national policies. Last, the European Parliament is the greenest of the European level institutions, and its proportion of green members is much higher than what it is at national levels (Lenshow 2005: 312-18).

The Common Agricultural Policy (CAP) is one of the core competences of the EU level (Nugent 2010: 279). The policy area is characterized by extensive EU policy involvement, and heavy reliance on legal regulation (Nugent 2010: 283-4). The policy was established during the 1960s by the original six EU-member states, trying to cope with the after-war food shortages, and worried about the sustainability of their own food production (Roederer-Rynning 2010: 182). In general, the CAP has changed its focus from agriculture towards rural development, where rural areas are seen as more than agricultural commodity production areas, among other things related to environmental concerns (Rieger 2005: 177). Even though the CAP is a supranational policy area, the developments are generally controlled by national interests, through the Council being the responsible body (Rieger 2005: 174). The development of the biofuels policy is contingent on all these three policy areas.

2.2 Features of the EU Biofuels Policies

Biofuels as a policy in the EU has three important features. First, the policy area is questioned related to both technical and ethical sides. Further the Member States' different national biofuels situation is important. These three features make up the foundation for the development of the biofuels policy in the European Community.

2.2.1 Technical Considerations

The biofuels main appeal is that this is a renewable energy source that can be introduced in the market without having to make major practical changes, as these fuels can be used without problem in the current vehicles. The fuels' applicability is heavily emphasized by the EU in relation to the promotion of biofuels. Even though these fuels are applicable in the transport sector, there are several obstacles to the fuels' success in the market. Practical problems related to the supply system or the storage of the fuels, and the compliance with the common fuel standards of the market are some examples. The biofuels also have to be competitive in order to succeed in the market (Scragg 2009: 134).

The costs of biofuels are related to two different global markets; the market of the crop that the production is based upon, and the oil market (Tréguer 2008: 16). Feedstock accounts for the majority of the production costs for biofuels. This makes the production of biofuels very much dependent on the world agricultural market. The costs for the production of the

different biofuels are currently falling because of technological innovations (World Watch Institute 2007: 20-1). Biofuels are also dependent on the oil market, as the price of oil determines the competitiveness of the biofuels (Tréguer 2008: 16). In order for the biofuels to compete with fossil fuels, the oil price needs to be at a certain level, normally quite high. However the competitiveness of biofuels is expected to increase, as the relative growth in the price of oil is expected to increase more rapidly than the price of biofuels (OECD-FAO 2011: 80).

The biofuels are divided into two categories according to their maturity as commercially available products. First generation biofuels is a term used to identify the biofuels that are produced from crops with sugar, starch and oil content, and that are converted into liquid fuels for transport using conventional technology. The next generation biofuels are produced from crops where the total biomass of the crop is used in the production. The processes to perform the transformation into liquid biofuels are technically advanced, and cannot be performed at a scale large enough for the commercial market today (World Watch Institute 2007: 23).

The biofuels available for transport today are all produced from crops that already are cultivated for other purposes than energy production purposes. In this way, the production of biofuels is not connected to high transformation costs. The fields can be cultivated in the same way as before, as the change is only related to the process of refining of the product. There are signs of the current biofuels crop cultivation being motivated by these "convenience reasons," and this is in close connection to the price of the fuels. The cultivation of soybeans for biofuels purposes is an example, as the crop is a growing source for biofuels production, despite its low energy yields per hectare. Soybeans are the most cultivated oil-seed crop in the world, and hence it is available in many places (World Watch Institute 2007: 28-32).

The biofuels currently in use belong to the first generation category and these fuels have several negative external consequences. The next generations of biofuels do to a great extent resolve these problems, but they cannot be expected to be commercially available on the market for still some time. The bottom line considering the access of biofuels to the market, is that they have to be cost effective compared to conventional fuels. Only the first generation biofuels fulfil this criterion today, and they will therefore dominate the market in the short and medium term (Scragg 2009: 62).

2.2.2 The Ethics of Biofuels

While the technical debate related to the economic aspects of biofuels, the ethical debate relates to ecological and social consequences of the promotion of these fuel types. These concerns are connected to the use of first generation biofuels.

The biofuels' renewable character is one of the main arguments for the development of such a policy. Still, because of the use of highly inefficient crops for the production, it is argued that the production of biofuels is so inefficient that the environmental benefits that they are supposed to provide are wiped out by their own production. There is no doubt that biomass can be a carbon neutral energy source e.g. when it is burned for heating in a stove in a private home. The case is quite different when the biomass is going through complicated processing in order to be transformed into gaseous and liquid fuels for transport (Scragg 2009: 179). A life cycle analysis of a biofuel takes into consideration the whole production process; the process where the crop is cultivated, the processing of the crop into a liquid fuel and the combustion of this fuel in a vehicle. Other factors that are relevant are the construction of the biofuels plant and the Indirect Land Use Changes[3] from the preparation of the production site. The results of these analyses, when conducted on the current biofuels available on the market, are not positive (Scragg 2009: 206).

Further there are concerns related to the depreciation of soil, air and water through the production of biofuels. This is related to the fact that biofuels are produced on an industrial scale, where the natural resources are exploited towards, and above, the carrying capacity of the ecosystem. This overexploitation, together with extensive use of fertilizers and industrial machinery in the cultivation process, has negative consequences for the ecosystem (Powers, Dominguez-Faus and Alvarez (2010).

The production of biofuels on an industrial scale also creates problems of social character. Local farmers employed on the production sites are many times exploited. Further, the production of biofuels is not a labour intensive industry, and there is no real hope for this industry to provide poor peasants in developing countries with a stable and long term income. There are also incidents where local peasants have been expropriated from their property, in order to make room for the biofuels plantation (Renner and McKeown 2010: 2).

[3] Indirect Land Use Changes (ILUC) is a concept that relates to the unintended emissions of carbon dioxide from the changed use of land areas when expanding the cultivation of energy crops.

The relationship between biofuels and food prices is also a complicated one. This is the well-known food versus fuel debate, where the increase in the cultivation of biofuels is feared to have influence on the food prices. This connection is very plausible, as the production of grain for food purposes and for fuel purposes is based on the same resources. In 2008, when the prices on some food products had doubled in just a few months, the production of biofuels was given much blame. There are other concerns that may have contributed to these heights in food prices in 2008, e.g. the speculation in grain, failure of crops in important food production areas and the oil price (Ajanovik 2011; The Guardian 2011).

2.2.3 The Member States' Interests

The Member States' interests constitute the third feature of the biofuels policy of the EU. The Member States interests and actions towards the promotion of biofuels for transport through Community regulations are influenced by their national situations. Wiesenthal et al. (2009: 793) investigate the different Member States and their relationship to the EU biofuels policy. The study is based on variables such as GDP, arable land per capita, the share of the agricultural sector in overall employment, transport energy demand, transport CO2 emissions and oil import dependency of a country. The argument is that Member States with a high GDP, a large amount of arable land per capita, a large share of the agricultural sector in overall employment, high transport energy demand and CO2 emissions from transport, and which are dependent on the import of oil, will to a greater degree be interested in the production of biofuels feedstock and using biofuels in transport (Wiesenthal et al. 2009: 793).

From the analysis it is indicated that Lithuania, Bulgaria, Denmark, Poland, Romania, Hungary and France have an elevated interest in the production of feedstock for biofuels production, and that Luxembourg, Germany, France, Ireland and maybe Finland have an elevated interest in biofuels consumption. France is the member state that has the highest combined value regarding these two variables. One can therefore conclude that France is the Member State of the Community with the most to gain from a European level biofuels policy. Still, the authors make these inferences with some reservations. Many of the characteristics related to biofuels are present in Ireland according to this study, but still the country is neither a biofuels producer nor a consumer. The authors include, based on this, a last explanatory factor, which they name "political will." (Wiesenthal et al. 2009: 793-4).

3 Methodology and Theory

This study is based on official documents related to the policy area of biofuels in the EU. The study includes documents within the time span from the beginning of the 1980s up until today. The developments have been analysed from a broad institutional approach, including contributions from Pierson (1996), Egeberg (2004) and Peters (2005). These contributions are used to identify relevant institutional factors that can explain the development of the biofuels policy in the EU. This chapter discusses the methodological considerations and the theoretical approach of the study.

3.1 Methodological considerations

This thesis conducts a qualitative case study of the development of the biofuels policy of the EU, and the most important data source used is documents found on the EU official website. The interpretations made from these data are complemented with secondary literature, in order to present an accurate picture of the development over time. When conducting a social science study there are a number of methodological concerns that have to be considered.

3.1.1 Research Design

> *To say that one is conducting a case study sometimes seems to imply that normal methodological rules do not apply; that one has entered a different methodological or epistemological (perhaps even ontological) zone* (Gerring 2007: 6).

The case study approach is very much used in the social sciences. Even so, as the quote from Gerring (2007: 6) shows, has the case study approach has some vagueness connected to it. Given this criticism it is especially important for a researcher using a case study research design, to be thorough when describing their methodological choices (Gerring 2007: 6). When conducting a case study, the researcher is generally aiming for a thorough account of the theme or subject in question. The goal of the study is to reveal the conditions under which a specific outcome occurs, and the causal mechanisms behind it, rather than providing information about how often the outcome in question is present. The broad applicability of findings and the statistical valid inferences are sacrificed (George and Bennet 2005: 31). At the same time however, the case study has a general aim of being able to say something about the case population. “A ‘case’ implies a family; it alleges that the particular is a case of

something else. (…) Cases are always hypotheses" (Walton 1992, in Andersen 1997: 61). This contradiction between the rejection of statistical transferable information and the goal of generalization to the case population is the basis of the critique of the case study approach. This criticism is only relevant if the results of a case study are promoted as general findings. If the researcher is clear about the contingencies related to the applicability of the findings, the argument is inapplicable (George and Bennet 2005: 31). This study accounts for the development of the common EU biofuels policy from its origin in the 1980s up until the policy of today. The study seeks to identify the drivers of the development of the policy, and to explain how the policy has evolved and taken its current shape. Moreover the study will seek to provide knowledge that is transferrable to the study of policy innovation and European integration in general. This is a classical case study approach according to George and Bennet (2005).

Generally there are two types of case studies, and they are separated by how they relate to theory. The A-theoretical case study does not relate to theory at all. The field one is studying is interesting on its own irrespective of theory, and the goal of the study is to attain as much information as possible about the issue in study (Andersen 1997: 64). Another type of case study is where theory is used as a tool to interpret the empirical findings. By applying one or more theories to the data, the story one is telling is structured according to disciplinary rules, and they can easily be recognized, distributed and used by other scientists (Andersen 1997: 69). This study approaches the development of the EU's biofuels policy from an institutional point of view. The empirical findings, regarding how this policy area came to life and its development up until today, will be interpreted through institutional concepts. Institutional perspectives are used as a tool for interpreting the empirical findings. This study belongs in the latter group that Andersen (1997) describes. The theoretical approach of this study is very wide, and it can therefore be criticised for being too comprehensive, and hence that the theory is applicable to almost everything, and that the inferences will be difficult to falsify. On the other hand does a broad approach secure that the relevant explanatory factors for the development of the biofuels policy of the EU are included.

3.1.2 Sources and Data

This study was possible to conduct because of two features of the modern European society; the access to the internet and the presence of acts of freedom of information. Until recently,

the type of information that is investigated in this thesis was sedimentary and restricted, in the sense that it was normally obtained through an archive with limited access. Through their commitments to transparency in the official governmental structure, the EU grants every citizen of the community access to the documents of the processes in the European Parliament, the Commission and the Council, through a regulation from 2001 (The European Commission 2001d). Further the Community has a well-functioning website, where all official documents are provided. The possibility to access information about the political processes inside the Council is still rather limited, as minutes from their debates are not published.

Because of this the access to data has not been a problem when conducting this study. There are however certain concerns to be aware of when using the internet to gather information and data for a study. The amount of information can easily be experienced as overwhelming because there is almost no limit to what you can find out about your topic. The main challenge is therefore to establish clear boundaries for the study, and thereby place limits to the information search, to avoid getting lost in the huge amount of information (McCulloch 2004: 34-5).

The area of biofuels is a small policy area as regards relevant documents. This is because the policy area is rather new on the EU level, and because of the matters characteristics. To provide the public with renewable energy in the transport sector is not the most important matter for the EU, compared to other policy areas. This leads to a manageable amount of information, and it is believed that the thesis includes the vast majority of the relevant documents from the development of this policy area. On the other hand, this is a technical policy area, and the documents that are studied contain a large amount of information that is difficult to grasp for a non-professional. This challenge is solved through the inclusion of a considerable account regarding the technical sides of biofuels as a policy area in the introduction to this thesis. Another challenge for the study, is that when using political documents, one has to keep in mind that the information can be intended to place the publisher in a certain light (McCulloch 2004: 34-5).

Document Analysis

Using documents as the basis of an investigation has many advantages compared to other types of data of the social sciences. The greatest advantage is that the object being studied is

not affected by the fact that it is being studied, which can be the situation if one is conducting e.g. personal interviews. Another advantage is that the context of the study can be accounted for easily. There are also practical advantages with data in the form of documents; that the researcher will be able to handle significant amounts of data, and that they can be rather unstructured, without impeding the study (Krippendorff 1980: 29-31). This study is based on different types of documents with varying statuses.

Regulations, Directives and Decisions form the legal basis of the EU. These legal acts take precedence over national law. *Regulations* are the most direct form of EU law; as soon as they are passed they are binding throughout every Member State of the Community. Regulations can be made by the Council, either alone or together with the Parliament, or by the Commission. *Directives* lay down certain end results that the Member States shall comply with, and the national authorities have to adapt their laws to the content of the directive within a certain date. *Decisions* relate to a specific case or a specific actor, either conferring rights or ordering compliance. Decisions can be taken by the Council, either alone or together with the Parliament, or by the Commission (The European Commission 2011)

These legal acts are adopted based on a *Proposal* from the Commission. This proposal is supplied to the Council, the Parliament, and the consultative bodies. Through the adoption process the different bodies make *Opinions* on the proposal. The proposal is further amended based on these opinions, depending on the status of the body that made the opinion in question. The EESC and the CoR are merely consultative bodies, and their opinions are therefore not binding for the legislative powers when adopting the final legal act. The Parliament and the Council are today equal in terms of power in the legislative process, and their agreement is necessary in order to get the proposal from the Commission adopted. This has not always been the case, at the beginning of the time span that this study investigates, the Parliament was merely regarded as a consultative body, whereas the Council was supplied with all legislative power. The Parliament has increased its power over time, and is today co-legislator with the Council (Nugent 2010: 310-14).

Further, the Commission publishes a large amount of communication documents, which make up the basis from which legal acts are made. These documents do not have a legally binding status, but they provide valuable insight in the process in advance of the adoption of a legal act. There are three different communication documents in the system: Green Papers, White Papers and Communications. A *Green Paper* is a document that is aiming at stimulating

discussion and to initiate the relevant bodies to participate in the debate, they are often followed by a *White Paper* which contains proposals for a specific action in a specific policy area (Summaries of EU Legislation 2012a; 2012b). *Communications* are documents intended for the exchange of information between the Commission and the other branches of government. The inferences made from the empirical account are seen in light of secondary literature related to biofuels or policy innovation in the EU.

The Member States

This study approaches the Member States through their collaboration in the Council, and by looking to secondary literature that treat the Member States and the common EU biofuels policy. This is not a traditional approach to the study of policy development in the EU, as Member States are normally supplied with a most important role. The reason for the lack of focus towards Member States interests in this study is that the information needed to make inferences regarding these relations was not possible to attain through the Internet. Because of the scope of this study it was not possible to travel and conduct interviews with central actors in the policy development, which would have been a way to solve this data problem.

3.1.3 Reliability and Validity

Studies investigating the society have two superior criteria for the quality of data; reliability and validity. The concept of reliability is concerned with whether or not one can trust the data the study is based on. In practice this means whether the results of the study are possible to replicate if conducting the same study one more time. The validity of the study depends on whether or not the data is adequate to answer the research question. The reliability of a study is a prerequisite for the validity (Grønmo 2004: 220-21).

The data that this study is based upon are primary sources from the EU's own official website, and I regard the reliability as high. The sources are also provided in the literature list, and the link to the website from where the document is obtained, is provided where this is possible. The study is based on institutional literature to interpret the data, which can be a problem as the researcher might become influenced by this in the search for data. The search for information was initially very wide, and the goal was to include as much information as possible, in order to exclude the problem of selection bias. The validity could have been improved by conducting interviews, as this would have exposed other sides of the policy

development than those revealed by official political documents. However, a document analysis is a good way to answer the research question, as it treats legislation and official political argumentation. By being clear about the sources used and the scope of the interpretations and conclusions from the study, I regard the validity to be secured.

3.2 Theoretical Approach

This thesis takes a broad institutional approach to the study of the development of the common EU biofuels policy. The approach includes the literary contributions from Pierson (1996), Egeberg (2004) and Peters (2005), which together constitute an applicable tool for the investigation of the research question of this study. The intention with this study is to find out how the biofuels policy of the EU was initiated, and how it has taken its current shape. The general assumption of institutionalism is that a policy outcome is dependent on the institutional setting of the process through which the policy has developed; initiative, debates, decision making and implementation (Peters 2005: 164). An institutional approach to the investigation and explanation of the development of the common EU biofuels policy will therefore steer the focus towards the institutional setting at the European level, and its institutionalized context, as the explanatory factor for the development.

3.2.1 New Institutionalism

The New institutionalism considers the values, rules, incentives and patterns of interaction of an institution are important explanatory factors for the outcome of governmental policies. Therefore one should seek knowledge of the institutional framework in order to understand and explain policy outcomes (Peters 2005: 164).

> *The basic argument is that institutions do matter, and that they matter more than anything else that could be used to explain political decisions. (…) Individuals remain as important actors in most of these theories, but the implicit or explicit argument is that there is substantially greater leverage to be gained through understanding the institutional frameworks within which they operate* (Peters 2005: 164).

EU's policies are traditionally regarded as the result of collaboration between Member States, where they advocate national interests. The European level institutions are seen as tools for the implementation of the policy that the Member States dictates. This view is challenged by the institutionalism approach, where one sees the EU politics as more complex than this. The

institutionalism emphasizes the EU institution's own influence on the policy, as they have evolved and developed new competences with time, carrying out a completely different role than they were initially provided with (Pierson 1996: 158).

The common way to approach the study of the EU is by theories such as intergovernmentalism or functionalism, or through a comparative perspective. These approaches treat the EU as an international regime, and they see the process of European integration as a process driven by the rational choices made by the Member States (Pierson 1996: 124-5), e.g. as Moravcsik expresses it:

> *European Integration can best be understood as a series of rational choices made by national leaders. These choices responded to constraints and opportunities stemming from the economic interests of powerful domestic constituents, the relative power of each state in the international system, and the role of institutions in bolstering the credibility of interstate commitment* (Moravcsik 1998: 18).

This results in an approach where the sole area of interest is the Member States' actions, due to the fact that the power to initiate change and development in the Community is concentrated with them. Further, the Member States' preferences are regarded as given when they collaborate with other Member States, and the superior goal for every Member State is to preserve their sovereignty. In addition, the Member States are not expected to engage in collaboration or cooperation with other Member States, if these activities do not reduce uncertainty, or resolve collective action problems. "The core calculation for member states is whether the benefits of collective action outweigh any possible risk to autonomy" (Pierson 1996: 129). The study of the EU institutions can therefore be carried out by accounting for the functions and roles, as this is the sole reason for their existence. A consequence of this emphasis regarding the collaboration between Member States, the traditional EU approaches are mostly concerned with the amending, revision or development of new treaties, or the process leading up to these. The day to day development of the policy in between these events is more or less ignored in this approach to the study of the EU (Pierson 1996: 128-30).

According to Pierson (1996:131) this approach's understanding of the EU was correct at some point in time. It was in fact the Member States that initiated the foundation of the institutions at the European level, when the first steps towards the European Community were taken. However, as time went by, the scope of these institutions changed, as the EU institutions gathered more competence and power. The institutional approach does therefore more

adequately account for the EU policy process, and the relationships between the stakeholders. This approach accounts for differences between the Member States' initial interests, and the actual EU policy outcome. It also takes into consideration that it is not easy for the Member States to go back on the processes of integration.

The characteristics of the EU institutions are emphasized in order to explain how this relationship came to be. When they were created by the Member States, the EU institutions were supplied with a certain amount of autonomy, in order to be able to perform the tasks for which they were established. The EU institutions are expected to use the power that they were provided with, for their own interests, including increasing their own autonomy. These institutions can therefore not be expected to be merely the subjects of Member States' interests. This creates a picture where the supranational institutions of the EU; the Commission, the Parliament and the Court, are under continuous suspicion from the intergovernmental institutions; the Council of the European Union and the European Council, when proposals are treated in the EU governmental system (Pierson 1996: 132-33).

Some general characteristics of the Member States do also contribute to the process where the EU institutions increase their autonomous role in the political sphere of the Community. First, politicians of the Member States are, like all politicians can be suspected to be, concerned with a time horizon that stretches until the next election date, and only to this point in time. The EU policies on the other hand, are connected to long time frames. In this way, the Member States politicians' actions regarding the European integration process are mostly motivated by short-term gains, but their actions will have long-term consequences, resulting in an unbalanced relationship in the EU levels favour (Pierson 1996: 135). Further, even if the Member State politicians are able to take into account the long-term impact of their actions directed towards the EU level, they are not protected from unintended consequences:

> *Complex social processes involving a large number of actors always generate elaborate feedback loops and significant interaction effects that decision makers cannot hope to fully comprehend* (Pierson 1996: 136).

This is related to the manifold issues that the EU is responsible for. Many policy areas that earlier were dealt with at the Member State level, are now the EU's responsibility. The consequence is that the Member States are having trouble getting an overview of the situation, and hence they are unable to identify the unintended consequences of the policy they have adopted. Last, the Member States' preferences are liable to change at least every fourth year,

as they are the direct consequences of national elections. The Member States' interests regarding the European integration are therefore volatile, resulting in a dispersed approach to the EU. The EU level on the other hand, does not change its interests and opinions every fourth year. This effect gets even stronger as the EU increases its competence on policy areas that traditionally have been important domestic concerns, and hence subject to considerable political dispute. The older European level issues, e.g. economic policy which is generally directed towards growth at almost any cost, have been generally less disputed (Pierson 1996: 136-9).

The power to change this process, and to transfer the power back to national level, is totally in the Member States' hands. Further, the reasons for not doing so are connected to the institutional barriers to change in the EU, e.g. the adoption of a treaty is dependent on unanimity between the Member States. Last, the withdrawal from the Community by a Member State is connected to high exit costs. The further the integration process goes, the more power is placed with the supranational institutions, and at the same time, the higher the costs would be for the Member States to break out of the Community (Pierson 1996: 142-44). The picture painted by Pierson (1996) is one where the EU institutions no longer can be regarded as an instrument for the Member States. The European level has taken over many of the policy areas that earlier were the Member States' responsibility, and through this process the European level is supplied with an increasing scope for own actions and initiatives. The Member States are still regarded as important actors in the policy process of the EU, but their actions are seriously constrained by the institutions of the Community, who have taken on a life of their own (Pierson 1996: 158).

3.2.2 The institutionalized EU

The process that Pierson (1996) accounts for leads to an understanding of the EU level as highly institutionalized. Therefore in order to explain the outcome of a policy process in the EU, one needs to take into account the institutions where the policy has been adopted. The next step is to account for the organizational characteristics of these institutions based on Egeberg (2004), in order to say something about their likely actions and influence towards the development of the biofuels policy of the EU.

The main dividing criterion in the European political order has traditionally been nation state borders. With the development of the European Community, and through the introduction of

the institutions at this governmental level, other dividing lines have been put in place; functional and ideological. In this way new conflict and cooperation patterns have developed at the European level, and the unidimensional territory based structure of European interaction is no longer present. Because of these changes, and because of the institutionalization of the European level, a full understanding of the conflict and cooperation pattern of the EU is not possible without accounting for the institutional framework (Egeberg 2004: 3-6).

> *The notion is not that institutions as a rule "invent" conflicts, however, institutions may systematically activate some latent cleavages while routinely ignoring others* (Egeberg 2004: 7).

Some main conclusions regarding the influence from the different criteria for division are made in Egeberg (2004). Institutions that are organized based on a territorial criterion encourage conflicts along territorial or nation state lines. Institutions that are organized based on non-territorial criteria encourage conflicts across territorial units or nation states. The traditional Intergovernmental Organization is based on territorial criteria. The United Nations is an example of such an organisation. In this forum the Member States represent their own interests and advocate these in collaboration with other Member States. This organization principle fosters conflicts along nation state lines. The organization of the EU institutions is also to a certain degree based on the territorial criterion, but this criterion is supplemented with the other two; the functional and the ideological. In this way the conflict and cooperation patterns are changed, leading to a more complicated picture (Egeberg 2004: 7-8).

The Council is primarily organized based on a territorial criterion, and the Member States are representing their national interests in this forum. This is a continuing of the traditional European basis for collaboration; the nation states. Further the Council supplements this territorial criterion with a functional criterion, by organizing the members into working parties. In addition, the ministers may at times speak on behalf of their political belief, adding the political dividing line to the Council's structure (Egeberg 2004: 9-10). The Council's organization supports the nation state structure of Europe, and the changed conflict lines of Europe are not related to this institution in particular.

In contrast, the Parliament is organized based on an ideological criterion. The members of the parliament are interacting, not on behalf of their nation state, but on behalf of their European level political party. This is an important feature of the Parliament, and it is regarded as vital

for the EU level political system. In the Parliament meetings, the members are seated by party family, rather than by nationality, in order to reduce the focus on national interests. The Parliament's standing committees includes a functional dimension to the organization, and the territorial organizational principle is present as the basis for organizing the elections and deciding the number of members from each Member State (Egeberg 2004: 10). This way of organizing fosters conflicts based on ideological differences, and steals emphasis from the territorially founded conflict lines. The emphasis on European level politics should be expected to increase importance of political dividing lines, such as the traditional left-right dimension, but also regarding emphasis on e.g. environmental concerns regarding policy development, which is a controversial matter where political parties express a wide range of opinions.

The Commission is organized based on functional criteria. Still the procedure for the recruiting of commissioners is based on national boundaries, as each Member State has one commissioner each. On the other hand the members of Commission are expected to act on behalf of the entire community once they have entered office. The Commission's functional criteria do in most cases coincide with the dividing lines inside the Member States, and in this way the Commission may extend its influence towards these areas also inside the Member States. Thus the national dividing lines are, at least to some extent wiped out, inside the scope of the policy area in question. Such structures are also evident in some intergovernmental organizations, but in these organizations the functional dimension is counteracted by a territorial dimension that the Commission lacks (Egeberg 2004: 11-12). The Commission's functionally based organizational principle fosters conflicts based on these lines (Egeberg 2004: 13).

Egeberg (2004) does not treat the EESC or the CoR, this is only natural as their importance in the EU system is limited. Still this thesis does to a great extent take the opinions of these institutions into consideration. It has therefore been made some inferences regarding the relation between their organization principles and their likely influence on the policy development. The EESC is a forum for the special interests of the Community. The members are representing the socio-economic interests, either as employers or employees. As a result, the EESC's dividing lines are based upon a combination of ideological dividing lines and functional dividing lines. The CoR is a forum where the regional differences inside the Community are the areas of focus. The territorial basis for division is therefore active, but not

in the sense of nation states, as the term regions refers to areas inside a Member State. Further, the CoR is organized in political groups corresponding with the political parties of the European Parliament. Both committees are in this way contributing to decreasing the importance of the traditional territorial dividing line. However, both Committees' influence is limited, as they carry out advisory roles and lack formal power in the system (Nugent 2010: 227-33).

3.2.3 Explaining Change

The institutional theories emphasize that the decisions made when an organization is formed, or a policy area is born, will have great impact on later developments. One important concept in this approach is path dependency, which implies that when one has started on a path, it takes a lot of effort to change the direction. The approach assumes that the policies of one time are affected by the policies of an earlier time, and in this way the initial choices will have great impact on the later ones in a policy area (Peters 2005: 71-73). Further, an institutional approach anticipates that there is little or only modest change in institutions. The fact that the actions that are taken in the organization are path dependent can be connected to a positive feedback effect, where initial policy choices are being reinforced through their success in the organization. In this way there is a great incentive to do things in the same way as always (Peters 2005: 76-7).

> *There will be change and evolution, but the range of possibilities for the development will have been constrained by the formative period of the institution* (Peters 2005: 74).

The concept of punctuated equilibrium is used to describe the change, and implies that institutions exist in a state of equilibrium in relation to the decisions made earlier in their history. This equilibrium is not permanent, and influences from the outside, relative to punctuations, can lead to more or less dramatic change in the institution. In this way the institutions are able to generate actions that are different from what the previous path would indicate (Peters 2005: 74). The institutions are also able to adapt through learning, where one pictures the change as a process of evolution, where one looks at different policies as necessarily imperfect, and therefore always generate change and adaptation, as a fact of life (Peters 2005: 78-9).

There are also institutional approaches that put much emphasis on the context surrounding the institution. This is based on the assumption that these surroundings are indeed

institutionalized themself. From the surrounding context the institution is confronted with socially created norms, and must try to incorporate and reflect these norms, at least outward. This understanding of institutions uses the metaphor of populations of biological organisms to the understanding of institutions, and it is called organizational ecology. The basic idea is that the institution needs to legitimize its actions in order to receive support from the context surrounding it. The institutions are very much embedded in their surrounding context, and hence they rely to a great extent on the support and legitimization from it (Peters 2005: 110-12).

3.2.4 Expectations from Theory

According to Pierson (1996), the EU governmental system has over time become institutionalized, and the outcome of policy at the EU level can therefore not be seen merely as a consequence of Member States' actions. The EU level institutions have taken the power supplied to them by the Member States when they were created, and used this power to acquire more power. The supranational institutions of the EU will therefore be expected to try to forward the integration process through placing competence at the EU level.

Based on this view of the EU level system the following relationship is expected to be found regarding the development of the EU biofuels policy. The Parliament and especially the Commission, because of its role as the engine for integration, will be the main drivers for the placement of competences on the EU level. This is because of their characteristics as supranational institutions. The Council on the other hand will be the brake to the development of a common biofuels policy, and will seek to place this competence at the Member State level. This is related to the Council's intergovernmental character. The EESC and the CoR are expected to be promoters of the common EU policy, but their influence on the development is limited. Two features are expected to influence the process where the Community level increases their competence over biofuels as a policy area.

Treaty recognition of the different policy areas that biofuels connect to is important as regards the power of the EU level. The connection to a policy area where the EU level has competence means that the Commission can propose biofuels policies without problem, including constraining the Member States. On the other hand, if the biofuels policy is connected to a policy area that is under Member State control, the Commission will be constrained in its possibility to propose policy. Biofuels are through the Renewable Energy

Directive, connected to three different policy areas. These policy areas have very different profiles on the EU level, and a connection to either of them will influence the development of the common biofuels policy. A connection to, both rural development and agriculture policies, and environmental policies, will foster the development of a common biofuels policy, while a connection to the energy policy will foster a placement of competence within the scope of the Member States. These assumptions are based on the fact that the environmental concerns and the concerns for rural development and agriculture are already supplied with a large amount of common EU policies, whereas the energy policy is not to any degree developed as a common policy.

The legislative procedures decide the relative power between the different EU institutions. The relationship between the two legislative branches of government, the Council and the Parliament, are the most dependent on this. Their relative power varies from the Council acting as the sole legislator, to a situation where the two have an equal status regarding the adoption of laws. Their relative power will be expected to decide which sides of the biofuels policy that is promoted the most, related to the organizational criteria of Egeberg (2004). The different EU institutions will, based on their differences in the institutional structure, promote different sides of the policy in the adoption process. This happens through a process where the conflict lines steer attention in different directions, through a mechanism where they "activate some latent cleavages while routinely ignoring others" (Egeberg 2004: 7). Biofuels as a policy area is contested. This creates the scope for the fostering of a multitude of arguments and views, because the governmental system has built in a series of dividing lines.

First, the Member States are at very different stages, regarding the use and production of biofuels. These differences between the Member States will be fronted in the Council, related to the territorial dividing lines that this institution is based upon. Further, biofuels are contested both regarding technical and functional characteristics, and also regarding ethical concerns, such as social inequality and ecological consequences. The European Parliament will, because of its political and ideological basis of organization, emphasize the ethical sides of the biofuels policy. The Commission will be more focused towards the technical and functional aspects of the biofuels policy, related to the functional dividing lines. In this way the different sides of the biofuels are assumed to be promoted through the governmental system.

The institutional perspectives are very much concerned with the inertia of institutions, and these theoretical approaches are considered to be best equipped to explain why an institution does not change or innovate. The approach bases very much of its explanations on the concept of path dependence, where one expects the change in institutions, if it does occur, to be contingent on the initial steps taken in the policy area. More dramatic change can occur if the institution experiences critical junctures, where the institution is forced to relate to the context and change (Peters 2005: 71-79). From this point of view the development of the EU's biofuels policy will be expected to be slow and contingent on the early choices made. These characteristics are expected to persist until the EU institutions experience a punctuation of the institutional equilibrium and the policy area in this way is supplied with new input from the context.

There are also institutional approaches that focus on the change in institutions. The concept of the ecological organization emphasize that institutions are responsive to their external context, and that they will be eager to change, if there is such an expectation in the organizational environment. The change does not necessarily have to be very deep. Institutions interpret their environment, and the adaptations that are made are dependent on the way that the institution perceives its environment. (Peters 2005: 111-15). This approach to explaining change emphasizes the importance of the institution's context. The EU's biofuels policy will be contingent on the international context, e.g. the general economic situation or the EU entering international agreements that are relevant to this policy area.

Summing Up Expectations

Based on these theories, the picture that is expected to be found in the analysis is one where the supranational EU level institutions, and especially the Commission, are driving the development of the common biofuels policy forward, while the Council is the brake to the integration. Further, the EU level institutions will foster different sides of the biofuels policy; the Commission's approach will be technical and economic, the Parliament will promote the ethical sides to biofuels, and especially the environmental concerns. The Council will promote the Member States' interests. In addition, a connection between biofuels and either the environmental policy or the rural development policy, will be beneficial for the development of a common policy, while a connection to the energy policy will be a brake to the development. Last, the development will be dependent on the context.

4 Empirical Analysis

This chapter accounts for the development of the EU's biofuels policy, and interprets these developments using institutional theory. The aim of the chapter is to answer the research question: How has the biofuels policy of the EU developed, and how can these developments be explained using an institutional approach?

The analysis is divided into four sub-chapters, referring to historical time periods. The first sub-chapter accounts for the 1980s, where the policy was very much affected by the concern for energy security, as a consequence of the oil crisis of the 1970s. The second sub-chapter treats the 1990s and the chaotic situation related to biofuels, which characterized this period. The third and fourth sub-chapters are dedicated to the two most important directives on biofuels in the EU; the Biofuels Directive, which is the first common EU legislation on biofuels, and the Renewable Energy Directive, which represents the current EU policy on biofuels.

The goal of this thesis is to describe the development of the biofuels policy of the EU, and to analyse these developments through institutional theory. Three different factors are emphasized in the analysis. Firstly, biofuels as a policy area is composed of a wide variety of sometimes diverging concerns; technical, ideological and the interests of the Member States. Secondly, characteristics of the EU system; the organization of the EU level institutions, including how this is effectively channelling different sides of biofuels, and the characteristics of the EU level policy process, including the relative power between the institutions, and the relationship between policy areas at the EU level. Lastly the influence on the policy from the surrounding context, e.g. in the form of international agreements such as the Kyoto Protocol, has also been emphasized.

4.1 EU Biofuels Policy and the Energy Crisis

The first EU directive treating biofuels for transport was adopted in 1985. The time period to which this directive belongs, is clearly marked by the oil crisis of the 1970s, and the insecurity that these events posed for the western world. This energy insecurity framing of the birth of this policy area clearly marks the development for later stages.

4.1.1 The Birth of Biofuels as a Policy Area

The oil crises of 1973 and 1979 changed the oil importing western countries energy security situation. Their supply of oil had not been disturbed in this way since the Second World War, and the western societies were characterized by total dependence on the access to cheap imported oil. The oil crisis of the 70s demonstrated the power that the oil exporting OPEC-countries had over the western world. Through these events "oil was dragged into politics in a way that had never been entangled before" (Parra 2004: 175). The development of a future energy policy in the EU in the early 1980s clearly reflected the situation in the oil market from the 1970s.

> *The Community economy has been badly hit by the effects of the doubling of oil prices in 1979. The challenge is to shield it from the risk of further pressure, both by reducing as rapidly as possible the Community's dependence on oil and also by taking effective measures to limit possible causes of increase in the price of its supplies. To these ends measures needs to be taken both on the energy demand side (energy saving and rational use of energy) and on the supply side (diversification). In the latter field efforts must be stepped up, particularly by increasing coal consumption, pursuing vigorous nuclear programmes and by developing renewable energy sources* (The European Commission 1981: 9).

The energy situation that the Community is facing is seen as a threat, and therefore EU needs to restructure its energy policy in the beginning of the 1980s. The Commission proposes that this restructuring shall be done through the implementation of three types of alternative energy sources: solid, nuclear and renewable energy. Renewable energy sources are not given any precedence over nuclear energy or non-imported fossil fuels as coal (The European Commission 1981: 9). The restructuring of the energy sources is also treated in the Commission communication *Energy and Energy Research in the Community*, where the relationship between the different energy sources and how the Commission sees their development is further clarified:

> *Action here has to be directed at solid fuels and nuclear as the main alternatives to oil in the medium-term; at gas, where particular questions of flexibility and security arise; and at alternative energy resources as a major contributor to Community supplies in the longer-term* (The European Commission 1983a: 19).

There are some obvious contrasts to the energy debate of today in this communication. First, the framing of nuclear energy as an eligible fuel has no resemblance to the nuclear debate of today. The debate today is influenced of the atomic catastrophes, e.g. the melt down in

Fukushima in March of 2011. The opinion is critical to these energy sources, and the trend is towards shutting down the nuclear plants in-stead of promoting them (BBC News Europe 2011).

Secondly, the use of fossil fuels is not seen as a problem because these fuels can be obtained from inside the Community. This line of argument would not have been possible to put forward in such a direct way today, as there is only one politically correct energy source: renewable energy. The concerns for climate change and the environment have become one of the fundamental values of our society, and an important point of reference of the political agenda. In these Commission communications there is no link between energy concern and environmental policies. The renewable energy sources are promoted because of their potential as alternatives to imported oil, and not because of their potential environmental benefits.

The Commission does however mention renewable energy in its communication *Community Energy Strategy* from 1983. This communication proposes six main areas of concerns related to the restructuring of the energy consumption of the Community, and among these "the development and commercialisation of new energy sources" (The European Commission 1983b: 2). On the other hand, the Commission does not state goals for how the renewable energy sources can contribute to the total energy use in the Community, nor does it suggest policies to increase their share.

These Commission communications from the beginning of the 1980s show an obvious connection between the energy concerns relevant for the EU and the world oil market. According to the institutional approach institutions are normally in a state of equilibrium, but are susceptible to dramatic change, including influence from their surrounding context, when this equilibrium is broken. The influence from the context needs to be of a considerable strength in order to break the equilibrium (Peters 2005:78). The oil crises of the 1970s can be seen as a punctuation of the equilibrium of the EU's energy policy. This punctuation leads to a shift in focus towards alternative energy sources, from the earlier dependence on crude oil. After having experienced such a punctuation, the institution is expected to return to a new equilibrium, which will be dependent upon the influence the context was making through the punctuation (Peters 2005: 71).

This punctuation of the EU energy policy, as described in these communications, make up the background for the Directive on crude oil savings in the transport sector that is adopted in

1985. The effect of the punctuation, is a strong focus on the concerns for energy security, which leads to the promotion of renewable energy sources. Biofuels as an EU level policy area is born because of the punctuation. One could therefore expect the new equilibrium, which was strongly influenced by the insecure energy situation of the time, to set the pace for the later developments in the common biofuels policy, leading to a stronger focus towards energy security in this policy area than otherwise natural.

4.1.2 Directive on Crude Oil Savings

Council Directive on crude-oil savings through the use of substitute fuel components in petrol from 1985 is the first EU legislation related to the promotion of non-fossil fuels for transport. The energy situation of the Community in 1985 is seen as a threat to the "harmonious development of economic activities, a continuous and balanced expansion and an increase in stability." These are founding values of the European Community, and their mention reveals how severe the energy situation was experienced. A reduction of the Community's dependence upon imported oil is regarded as a means effectively contributing to the accomplishments of these three superior policy ends (The European Parliament and Council 1985: 20).

> *The use of crude oil to manufacture petrol or vehicles propelled by internal combustion spark-ignited engines can be reduced through blending hydrocarbon petrol with substitute fuel components* (The European Parliament and the Council 1985: 20).

The directive states a firm belief in these fuels and their possible influence on the energy security situation of the Community, and there is no reference to problematic sides of biofuels for transport. The promotion of biofuels in this way is straight forward, without the conflicting or interfering concerns that we see today. This is because of the time and place of the directive. In the middle of the 1980s there were not any negative external consequences of biofuels to consider, as world production was modest, and the problematic sides were not revealed. The straight forward promotion of biofuels can also be related to the fact that there is only one motivation for the policy: energy security.

The directive further highlights that these fuels are possible to use in existing vehicle engines, and they may be supplied through the existing supply system. In addition these fuels do not

contain any additional safety, health or environmental risks, compared to the conventional fuels. Hence the implementation of this policy will not lead to any noticeable changes for the citizens of the Community, or compromise the fundamental right to mobility. The consumer's need of a suitable fuel regardless of Community location is emphasized. The concern for improving the energy security of the Community is not to compromise the right to mobility (The European Parliament and Council 1985: 20-21).

Through the implementation of this directive, the Member States are not required to actively promote these fuels through their national legislation, but rather to let the substitute fuels be a part of their national markets without discrimination. The promotion is one where the Member States are asked "not to hinder" the use of biologically based fuels, which does not constrain action at national level (The European Parliament and Council 1985: 21).

> *Member States shall not prevent, restrict or discourage on the grounds of oxygenate content, the production, marketing and free movement of blended petrol containing organic, oxygenate compounds (...)* (The European Parliament and Council 1985: 21).

The Consultation Procedure

The legislative procedure in use and actually the only procedure available at this point in time, is the consultation procedure. This procedure supplies the Parliament with a consultative role in the policy process, and leaves main the power to the Council. The Parliament's opinion is not binding, and the Council can decide to listen to the Parliament if they wish The EESC is also consulted, but its opinion is never binding for the Council (Nugent 2010: 310-14). Even though the content of these documents did not necessarily influence the process of the adoption of the directive, they give a valuable insight into the background for the directive, and the general debate regarding biofuels at the time.

The Parliament's opinion on the directive is supportive towards the development of such a policy. The use of substitute fuels is regarded by the Parliament as an important factor in order to increase the energy independence of the Community. Further, the Parliament expands the argumentation to also include environmental concerns, by emphasizing that "the use of such blends has the advantage of reducing pollution of the environment" in their opinion (The European Parliament 1983: 91). The Parliament's basis for organization is the political parties which are represented. This fosters a broader approach to the policy field than the functional dividing lines of the Commission. The political dividing lines promote the ethical and

ideological sides of the biofuels policy (Egeberg 2004: 10). Furthermore the Parliament has among its political groups a very large group belonging to the environmental or green movement (Lenshow 2005: 312-18). It is therefore not surprising that it is the Parliament that introduces the environmental concerns to the biofuels policy. However the environmental concerns were not included in the final directive. This is a result of the legislative procedure where the Parliament is provided with a consultative role.

Many of the representatives in the EESC belong to the agricultural sector, and the connection between biofuels and the agricultural concerns could therefore be expected to be found in the opinion from the EESC. The environmental organizations are also present in this body, which makes the promotion of environmental concerns plausible (Nugent 2010: 228). This is not the case however, as the EESC mentions the concerns for energy security as the sole motivation for the development of such a policy (The European Economic and Social Committee 1983: 2). The Committee normally acts by unanimity, and it is therefore possible that the agricultural and environmental concerns were not able to speak to the whole Committee.

The Committee is positive towards the development of a biofuels policy, but notes that the distribution of renewable fuels in transport may be difficult as long as these fuels are not economically comparable to fossil fuels, and as long as their supply chains are in danger of being disrupted. Furthermore the Committee stresses that fossil fuels obtained from inside the Community are not fully exploited, and that this also should be the area of focus for the energy policy (The European Economic and Social Committee 1983: 2). This is an economic and functional approach to biofuels. The fuels are treated as substitute fuels and nothing more. The EESC represents the special interests of the Community (Nugent 2010: 227), which can be regarded as a partly ideological and partly functional organizational criterion. The functional criterion would be expected to promote this economic approach to biofuels.

The directive does not reallocate power from the national level to the Community level. This should be related to the legislative procedure in use, where the Council is the sole legislator. The Council is an intergovernmental organization, which means that the Member States represent their national interests in this body (Egeberg 2004: 9). The sovereign power that the Council possesses in the consultation procedure has put the adoption of the policy in the Member States' hands. On the other hand, the Crude oil savings directive is the first biofuels directive in the EU. And a start without a strong Community interference is not unexpected.

The Concern for Energy Security

Energy security is the only concern mentioned as the background for the use of biofuels, which is a consequence of the energy situation of the time. The other two concerns that together with the concerns for energy security form part of the policy today; concerns for the environment and for rural development, are not mentioned. The lack of the environmental concerns is a consequence of the status that this policy area had in the EU in the beginning of the 1980s. The concerns were not recognized as belonging to an EU level policy area, and in this way they were kept from being a part of the policy on the promotion of biofuels. The environmental concerns were not introduced to the EU level before the SEA of 1986 (Nugent 2010).

However, the environmental concerns were already before accomplishing treaty recognition through the SEA, supplied with EU level policies (Nugent 2010: 280). Community competence over a policy area is generally seen as a prerequisite for the development of common policies, as this is the only way that the Commission can propose policy. The picture is however not that straight forward. Treaty provision is not a guarantee for EU level policy development within a policy area, and there are also examples of development of policies on an informal basis without treaty recognition (Nugent 2010: 279-80). The Parliament's mentioning of these concerns is also an indication of the presence of the environmental concerns. If the Parliament had been supplied with more power in the legislative procedure in use, this could have meant a stronger emphasis on environmental concerns at an earlier stage, because of the presence of the large environmental group in the Parliament.

The concerns for rural development and agriculture are not mentioned in this directive. This is strange as the CAP is one of the oldest and most integrated policy areas of the EU. The EESC's lack of focus on this matter is especially striking, as this body contains a large group of agricultural interests. The CAP is composed of two different policy areas; agriculture and rural development. The production of biofuels is an activity that relates more to the rural development part, as this is not traditional use of agricultural products. The lack of focus on CAP concerns in this directive can be related to the fact that the rural development part of CAP is of a more recent character (Rieger 2005: 177; Roederer-Rynning 2010: 182). It is therefore possible that the production of biofuels was not regarded as CAP-relevant at this point in time, and this can explain the lack of agricultural concerns in the directive.

As mentioned earlier, this directive was adopted through the consultation procedure, where the Council is the sole legislator. The Council's meetings are not equipped with the same degree of transparency as the other EU level institutions, and it is therefore possible that the CAP concerns in fact were present in the debates, without this being made official. One plausible reason for doing this, framing the policy as an energy security issue, in-stead of a CAP issue, is that the CAP is a debated issue in the EU, with powerful Member States as fierce critics (Nugent 2010). The energy security concerns on the other had are seen as common for all the Member States.

There is a strong emphasis on energy security in this period, and the other two concerns do not form part of the initial steps of the policy. The policy was framed as an energy security concern up until the Renewable Energy Directive in 2009. The impact from the punctuation in the energy security's equilibrium was considerable, and had severe impact on the later developments.

4.2 Chaotic Biofuels Promotion

The 1990s are characterized by a chaotic situation as regards the promotion of biofuels in the EU (Pahl 2005). This is related to the fact that the promotion is based in a directive with built in contradictions, both allowing and denying tax exemptions for biofuels. Even so the Commission takes a very ambitious approach to the promotion of biofuels in this period. In the end of the decade the Kyoto Protocol changes the scope of the biofuels policy by providing a punctuation in the biofuels policy's equilibrium.

4.2.1 Directive on Excise Duties on Mineral Oils

Council Directive on the harmonization of the structures of excise duties on mineral oils from 1992 does not have a specific aim to promote biofuels or renewable energy, but it does provide certain possibilities for the use of tax exemptions to promote renewable sources of energy. The directive also contains a fundamental contradiction as regards the Member States' possibility to treat biofuels differently than conventional fuels. Initially the biologically based fuels are put under the same regime as fossil fuels:

> *Any product intended for use, offered for sale or used as motor fuels or as an additive or extended in motor fuels, shall be taxed as a motor fuel* (The Council of the European Communities 1992: 12).

Later however, certain exemptions from taxes are laid down at Community level for these types of fuels, and the Member States are given the possibility to apply further exemptions or reduced rates within their own territory, without this infringing the competition rules of the Community (The Council of the European Communities 1992: 12). First, the Member States have the possibility to exempt biofuels from taxation at a pilot stage in the development process:

> *Without prejudice to other Community provisions, Member States may apply total or partial exemptions or reductions in the rate of duty to mineral oil used under fiscal control: (...) in the field of pilot projects for the technological development of more environmentally-friendly products and in particular in relation to fuels from renewable sources (...)* (The Council of the European Communities 1992: 14).

Secondly, further exemptions and reductions in the taxes on biofuels may be imposed by the Member States:

> *The Council, acting unanimously on a proposal from the Commission, may authorize any Member State to introduce further exemptions or reductions for specific policy consideration* (The Council of the European Communities 1992: 14).

This was not a directive with a high environmental profile, aiming a promoting biofuels as a renewable energy source in the transport sector. Its adoption in 1992 resulted nevertheless in a situation where this directive became the basis for the promotion of biofuels in the EU in the 1990s. In this way the directive became very central for the promotion of biofuels in the Community, and also for the development of the legislation and regulation of biologically based fuels at later times. The directive was subject for a wide range of interpretations regarding the Member States' mandate to exempt their biofuels from taxation on national markets.

4.2.2 The French Measures

In 1992 the French government informed the Commission that they had imposed tax reductions for biofuels of agricultural origin. This decision was based on the possibility to exempt renewable energy from taxation in pilot projects from the Directive on excise duties

on mineral oil. This leads to a series of diverging interpretations of the directive from the Commission, the Council and the Court of First Instances. France was not the only Member State that was interested in exempting their biofuels from taxation, e.g. a similar process to this was carried for Italian biofuels (The European Commission 2007). The French interpretation of the excise duties directive will be used as an example of the chaotic biofuels promotion of the 1990s in the EU.

The measures in question, introduced by the French government, consist of exemptions from the domestic taxation on petroleum products for products of agricultural origin. These products should be obtained from crops grown on land set aside for non-food use, the origin of the products shall be certified by the Ministry of Agriculture and Forests and the products have to be produced in production units considered as experimental by the French authorities. The measures also include technical progress agreements, guaranteeing that these tax exemptions will remain at 1993 level, and further that the state will compensate for the differences which may occur between the actual gain for a certain product and the maximum exemption possible from this policy. The aim of these measures is to introduce a limited amount of these energy sources into motor vehicle fuels and to domestic heating oil (The European Commission: 1997c: 27-8).

The French government argues that their measures are in accordance with the directive on excise duties, based on the directive's statement that the Member States are allowed to exempt renewable energy products from taxation in a pilot phase. This argument was disputed based on the other article of the mentioned directive, which puts vegetable oils under the same taxation regime as fossil fuels. The French authorities argue that their measures can be seen as aid to promote an important common European interest, and also that the measures are in accordance with the promotion of renewable energy in general and biofuels in particular (The European Commission 1997c: 31-2).

Based on the exchange of these arguments the Commission decides on 18 of December 1996 that the French measures are incompatible with the common market, and requires France to discontinue these measures. Later however, on its meeting of 9 of April 1997 the Commission decides that the measures are compatible with Community law after all. However, on 27 September 2000 the Court of First Instance partially annulled the Commission Decision, following an appeal to the Court against the Commission's Decision by the company BP Chemicals (The European Court of First Instance 2000: 20). The ruling was based on the

Courts impression that one of the French biofuels in question had exceeded the pilot phase, while the other was still covered by this definition from the directive on excise duties (Newsroom of the European Union 2000).

Nevertheless the Council decision of March 2002 authorizes France to apply the schemes. This decision was based on the possibility for the Council to authorise any Member State to introduce further exemptions from taxation for specific policy considerations from the mentioned directive (The Council of the European Union 2002a: 25). Finally, the Commission's decision of 15 of May 2002 states that the French measures do not distort competition or affect trade, and that the measures are regarded as part of a long term strategy of the Community in "reducing dependence on imported oil, developing alternative energy sources and improving the use made of agricultural resources" (The European Commission 2002a: 41).

The final decision to authorise France to apply the schemes was made by the Council. The Council is an intergovernmental institution and the Member States' interests are the basis for the discussions in this institution (Egeberg 2004: 9). France is a powerful Member State whose influence in the Council can be expected to be considerable. Therefore it is plausible that the country used its influence in order to be able to apply the schemes. Wiesenthal et al. (2009) suggests France as the Member State with the most to gain from a development of the EU biofuels policy.

This process exemplifies very well the chaos that characterized the promotion of biofuels in the EU in the 1990s. The situation was complex, and resource demanding. Therefore it is possible that the processes like this, where diverging interpretations were made regarding the same measures in light of the same legislation, together constituted the final push in order to provide the Community with a common biofuels policy. According to Pierson (1996: 133), the EU level institutions are always trying to increase their power. The situation in the 1990s created an opportunity for the EU level to increase its power over the biofuels policy. As the process of the French measures show, the Member States were already interested in promoting biofuels. Further the policy tools in use were much stronger than the ones at EU level. The chaotic situation of the 1990s regarding biofuels, gave the Commission an opportunity to promote a policy where more power was placed at the EU level. The adoption of the Biofuels Directive in 2003, containing a common biofuels policy, needs to be seen in relation to this situation in the 1990s.

4.2.3 Proposed Tax Exemptions for Agricultural Motor Fuels

In 1992 the Commission proposed a Directive on excise duties on motor fuels from agricultural sources for the Parliament and the Council. The content of this proposal would give the Member States the possibility to actively promote biologically based fuels at national level, through tax exemptions for motor fuels from agricultural origin. The reduction for the biofuels would be considerable, as the duties are not to exceed 10% of the rate imposed upon conventional fuel types (The European Commission 1992: 7).

In this way biofuels would be given a great advantage in a market situation compared to conventional fuels. This is remarkable in the EU context, where the free market and competition is the most fundamental factor (Wilks 2005: 114). This disrespect of the market rules indicates that there must be other important policy areas related to this proposal. The CAP set-aside measures from 1992, is likely to be part of the background for this proposal, even though no such connection is expressed in the directive. The set-aside reforms were put in place in order to limit the rising production of agricultural commodities in the Community, through withdrawing land from food production. The set-aside rate was generally 10%, with a possibility for voluntary set-aside above this limit. These measures were important for the production of biofuels as they would warrant the use of these land areas for other purposes than food production. In this way, the cultivation of crops for biofuels production on the land set-aside represents a possibility for farmers to exploit land areas that otherwise would have been unexploited (Eikeland 2005: 15-17).

These are ambitious targets proposed from the Commission. However, the proposal never makes a directive. This is because the Council never takes a decision on the matter, and the Commission regards the proposal as no longer topical in 1999 and decides to withdraw it (The European Commission 1999a: 7). The lack of interest from the Council reveals this institution's lack of interest in the development of a common policy where biofuels were exempted from taxation. The Council's intergovernmental character leads to a situation where the Member States' interests dominate (Egeberg 2004: 9). From the actions of the Council one can therefore conclude that the Member States were not supportive of a common Community exemption for biofuels from taxation.

The Commission's ambitions are also made clear through a directive proposal from the Commission in 1997 where Member States were given the opportunity to exempt certain

alternative fuels from taxation (The European Commission 1997a: 2). Tax exemptions were seen as providing a great potential for the development of a biofuels industry in the Community. Further, the Commission mentions both environmental and employment concerns for the development of the biofuels industry (The European Commission 1997a: 10-11). Concerns for the environment and employment had not been very central for the development of the policy up until now. However, a shift towards the environmental concerns is definitely in the air, through the UN Framework Convention on Climate Change and the Kyoto Protocol.

4.2.4 The UN Framework Convention and the Kyoto Protocol

Through the 1990s the world society got increasingly preoccupied with the environmental concerns and the climate changes. These concerns were institutionalized at world level through international agreements such as the Framework Convention of the United Nations (UN) and the succeeding Kyoto Protocol. Also inside the EU environmental concerns were increasing in importance. The Community level environmental policy was introduced through the SEA of 1986, which soon fostered a considerable amount of policies towards these concerns. Environmental issues had been an important part of the EU political agenda since the beginning of the 1970s, but through the SEA these concerns were institutionalized and the scope for legislation was expanded (Lenschow 2005: 307).

In June 1992 the UN Framework Convention was signed by the European Community and the Member States, and was ratified in December 1993 (The Council of the European Union 1994a). The UN Framework Convention calls for wide cooperation between the countries of the world in order to prevent climate change caused by human activities. The Convention obliges the Member States among other things to promote the technical development of renewable fuel sources and to promote the use of this type of energy (United Nations 1992: 6). The EU signed the Kyoto Protocol in April 1998, and it was ratified in May 2002 (The Council of the European Union 2002b). The Kyoto Protocol is a continuation of the Framework Convention, but it also contains a series of specific and mandatory tools to combat emissions of green-house gases. The Protocol requires its members to ensure that their emissions of green-house gases do not exceed the Protocol limits. The EU is given a limit of 92%, meaning that their emissions shall not exceed 92% of their 1990 emissions. The overall

goal of the protocol is to reduce the global emissions of green-house gases by 5% from 1990 level in the period 2008-2012 (United Nations 1998: 6).

Earlier, the biofuels policy had not been concerned with the potential environmental benefits. Despite the active EU level opinion related to the environment, and the large part of green representatives in the Parliament (Lenschow 2005: 307). The sole goal of the policy aiming to promote biofuels was the concerns for energy security. This dominance can be traced back to the forming period of the policy. This was very much contingent on the oil crises of the 1970s, and led to the energy security dominance of the biofuels policy up until this point. The policy development can therefore be characterized as path dependent, since the initial policy choices are constraining the later developments, and leads to the pursuit of a certain biofuels path irrespective of the developments in the context (Peters 2005: 71).

Through these two international agreements, and especially the Kyoto Protocol with its binding targets, the EU was obliged to address the environmental concerns in a new way. Even though the environmental concerns had been an important factor on the world, and EU, scene for some time already, the institutionalisation of these concerns was new. These arguments were supplied with a new strength, and led the environmental concerns to become a more extensive policy concern in the EU. In this way the implementation of the Kyoto Protocol can be regarded as a punctuation in the equilibrium of the biofuels policy. The policy development is exposed for such a strong force that it is not able to resist being influenced, despite the strong force of path dependency pulling the development towards the known concerns of energy security (Peters 2005: 74).

Biofuels and the Environmental Concerns

It does not however look like the signing of the Kyoto Protocol had an immediate effect on the biofuels policy of the EU. In the communication *The Implementation of the Kyoto Protocol*, the Commission emphasizes the need for action that is compatible with the ambitions that the EU showed in the negotiations of the Kyoto Protocol (The European Commission 1999b: 2). The communication does however not mention biologically based fuels as a potential renewable energy source in the transport sector. The emphasis directed at other types of renewable energies than the ones provided from biomass. And in the transport sector the emphasis is directed towards the technical advances regarding vehicle engines (The European Commission 1999b: 5). Moreover in the communication *The Energy Dimension of*

Climate Change the Commission expresses a very clear and ambitious plan for the cuts in emissions of green-house gases in the Community. The use of biomass as an energy source is mentioned, and the production of biofuels is seen as beneficial in relation to the CAP (The European Commission 1997d: 9). The communication expresses concerns for the high emissions in the transport sector, and promotes action towards the reduction of these. The belief in biomass as a renewable energy source is however mainly directed towards the production of electricity and the heating of buildings (The European Commission 1997d: 3-8). These Commission communications show that there is no immediate connection between the Kyoto Protocol and the promoting of the biofuels. Biofuels are not mentioned as a tool to accomplish the targets from the Protocol, and their potential as a renewable energy source in transport is not yet emphasized. Further the motivation of the biofuels policy is still predominantly concerned with energy security. It is clear that the implementation of the Kyoto Protocol affected the general feeling in the Community towards a more environmental focus, but it did not immediately affect the biofuels policy. The focus related to the accomplishment of the targets in the Kyoto Protocol is related to other areas of the society than the transport sector.

This tendency changes in the late 1990s and in the beginning of the 2000s. The communication *A Sustainable Europe for a Better World* from 2001 includes the obligations from the Kyoto Protocol as the main argument for the use of biofuels for transport, as opposed to the concerns for energy security. This communication promotes a wide range of instruments in order to transform the energy mix in a renewable direction. Of the proposed measures to accomplish this, is a target of 7% renewable energy, including biofuels, in the total fuels consumption of cars and trucks in the Union by 2010, and 20% by 2020. These targets proposed from the Commission in 2001 are very ambitious. The goal of 20% renewable energy in the transport sector by 2020 is the double of the target that is proposed in the Renewable Energy Directive from 2009 (The European Commission 2001a: 10).

When accounting for the background for the necessity of such a policy the argumentation is predominantly focused on environmental concerns, and the goal of the policy is connected directly to the accomplishment of the emission reduction targets of the Kyoto Protocol (The European Commission 2001a: 10). It is clear that the signing of the Kyoto Protocol changed the EU approach to the promotion of biofuels. In the late 1990s and the beginning of the 2000s the argumentation for such a policy has shifted from primarily being an energy security

issue, to also including environmental protection as a motivation. It looks therefore like the original scope for the policy, to be a tool to diversify the Community's energy mix is not as important as it had been earlier. The environmental concerns are from this point part of the biofuels policy, and it is framed as an equally important concern as the energy security concern. In this hierarchy of biofuels arguments, the environmental concerns now prevail.

The Commission does not show any interest towards a framing of the biofuels in an environmental direction immediately after the Kyoto Protocol. The dominance of the energy security concerns seems to have been strong. Since the introduction of the environmental concerns is slow, one could interpret the inclusion of these concerns as a result of the continuous development of the environmental issues at the EU level, and not as a direct impact from the Kyoto Protocol from the context. In this way the development is better understood through the concept of evolution in institutions, rather than the punctuated equilibrium concept. The evolution concept sees the change in institutions as more gradual and slow, and as a process where the institution is adapting rather than being constrained from the context (Peters 2005: 79). On the other hand, the shift from an energy security frame of the policy, to an environmental frame is very strong, and the environmental concerns prevail as the most important argument for biofuels in the EU up until today. This indicates that the Kyoto Protocol was experienced as a punctuation of the EU biofuels policy's equilibrium (Peters 2005: 78). Accompanied by these strong environmental concerns, the biofuels policy of the EU got its breakthrough in the 2000s. Two comprehensive directives with ambitious targets for the promotion of biofuels were adopted; the Biofuels Directive from 2003 and the Renewable Energy Directive from 2009. In this way the chaotic biofuels regulation of the 1990s is taken care of through a common EU policy. It is in this period that the EU becomes the important actor on the world biofuels scene that it is today.

4.3 The Biofuels Directive

Three directives related to biofuels in the transport sector were promoted in 2003; the Biofuels Directive, the Energy Taxation Directive and the Fuel Quality Directive. Together these directives ensured that the confusion from the 1990s was taken care of. The Biofuels Directive is a comprehensive promotion of biofuels for transport, and sets the pace for the ambitious promotion of biofuels in the 2000s. The directive lays down obligations for the Member States to introduce legislation and the necessary measures in order to ensure that by

2005 there is a certain amount of biofuels available on their markets (The European Commission 2001c: 7). The Biofuels Directive can largely be seen as the breakthrough for the common biofuels policy of the EU.

The Energy Taxation Directive

The Energy Taxation Directive, restructures all taxation on energy products and electricity in the Community, and through this directive the Member States are allowed to exempt biologically based fuels from the minimum rates of taxation (The Council of the European Union 2003b: 51). Up until the adoption of this directive the Member States were able to exempt biofuels from taxation in pilot projects, through the Directive on excise duties on mineral oils from 1992 (The Council of the European Communities 1992). A Community legislation specifically aiming at imposing reduced rates of excise duties to promote biologically based fuels for transport had been developing for a long time. The Commission proposed such measures already in 1992, and again in 1997 (The European Commission 1992: 2; The European Commission 1997a). The proposals from the Commission did not receive support from the Council, and hence the proposals never became directives. This problematic development of the reduced taxation on biofuels shows the strong influence that the considerations for the common market have on the different parts of EU policies. The EU is first and foremost a common market, and therefore it is often difficult to adopt policies that distort the competition in the Community, e.g. tax exemptions for certain products (Wilks 2005: 115).

The Fuel Quality Directive

The Fuel Quality Directive was also adopted in 2003. The directive's scope is to review the fuel quality legislation of the Community, in order to ensure that it is up to date as regards air emission legislation, and the general environmental objectives of the Community (The European Parliament and the Council 2003a: 10). The directive further speaks of the promotion of biofuels in the transport sector, "including the discussion of the need for specific legislation" (The European Parliament and the Council 2003a: 11). The Biofuels Directive and the Renewable Energy Directive are very preoccupied with the quality of the biofuels. One of the criteria for the introduction of biofuels is that they correspond to the Fuel Quality

Directive. The quality shall never be compromised on expense of the other outcome goals of the policy.

> *These considerations [environmental obligations and energy security] should not detract in any way from the importance of compliance with Community legislation on fuel quality* (The European Parliament and the Council 2003b: 42).

4.3.1 Ambitious Targets in the Hands of the Member States

The legislative procedure in use for the adoption process of the Biofuels Directive was the ordinary procedure. The procedure includes as much as three readings, and provides the Parliament and the Council with equal amounts of power (Nugent 2010: 315-19). The Commission's proposal for a Biofuels Directive was supplied to the Council, the Parliament, the EESC and the CoR. The Parliament and the Council did not reach an agreement on the first reading, and the Council supplied the Parliament with another draft for the directive, which led to the adoption of the Biofuels Directive.

The final directive adopted requests the Member States to ensure that a minimum of biofuels and other renewable fuels are placed on their national markets, and further to set national indicative targets for the proportion of these fuels in the overall consumption of energy in the transport sector. The minimum target for proportion biofuels or other renewable fuels of the total fuel consumption was set at 2% for 2005 and 5, 57% for 2010 (The European Parliament and the Council 2003b: 44). These targets are very ambitious, but at the same time they are indicative, implying that the Member States does not risk sanctions if they are unable to comply with the targets. In the original proposal from the Commission however, the targets were mandatory:

> *The Commission believes that the simplest way of promoting large-scale biofuel penetration in the long term would be through obligatory blending of a certain percentage of biofuels into gasoline and diesel marketed throughout Europe* (The European Commission 2001c: 7).

The Commission's ambitions towards a common biofuels policy are evident through the placement of the competence at the EU level. The Commission being one of the supranational institutions of the EU is expected to increase the Community levels competence whenever this is possible (Pierson 1996: 133). The two consultative committees, the EESC and the CoR, both see the Member States as more fitted to handle the details related to the promotion of

biofuels, rather than the Community level, and the directive should therefore be more flexible towards the Member States (The European Economic and Social Committee 2002: 8; Committee of the Regions 2002). The Parliament does not treat the placement of the power regarding execution of the policy. The Parliament is a supranational body, where trans-European ideas are strong, and the promotion of community wide policies is expected to thrive (Egeberg 2004: 10). The EESC and the CoR are also supranational bodies (Nugent 2010), and their advocating of the Member States' need to decide for their own the content of the policy is therefore remarkable. Still, the members are nationally elected, and it is possible that national interests are finding their way into these bodies. The members of Parliament are also nationally elected, but the political organization of the Parliament is widely known to be very efficient in wiping out the national dividing lines (Egeberg 2004). It is possible that the diving lines of the two consultative committees are not as strong as is the case for the Parliament.

The Council of the European Union introduced some main changes in the Biofuels Directive. First, the scope of the directive was changed to also include other renewable sources, while the original proposal from the Commission focused solely on biologically based fuels. The Council believed the Member States would thus be able to have a broad focus in their promotion of renewable fuels in the transport sector. The Council also proposed indicative targets for the proportion of biofuels, in contrast to the mandatory targets proposed from the Commission. This was done in order to give the Member States an opportunity to impose the measures in a gradual and flexible manner. With these indicative targets follows also a review clause and a possibility to develop the targets into mandatory targets after some time, based on the reporting from the Member States and the Commission about the implementation of the targets. The Council also provided the Member States with the responsibility to choose the biofuels most suitable for their national markets, and supplied the directive with a list of approved biofuels (The Council of the European Union 2003a: 6).

These changes were extensive, and by making these changes the Council went quite far in transferring the regulation of the promotion of the use of biofuels from the Community level to the Member State level. The final directive was adopted without any strong policy tools to promote this policy from the Commission's side. The implementation of the targets of the directive was in this way made totally dependent on the Member States' actions. Furthermore the Council's changes regarding the scope of the directive, towards all types of renewable

fuels, lead to a less specific directive, where biofuels were just one of many eligible alternative fuel types for the transport sector. The Council's changes resulted in a directive with considerable less potential for influencing the actions of the Member States from the Community level.

The Council's restructuring of the directive should be related to its intergovernmental character. In this forum the Member States are acting on behalf of own national interests in this forum. From this it could be interpreted that the Member States did not have the same ambitions as the institutions of the Community level regarding the introduction of biofuels in the transport sector. As Wiestenthal et al. (2009: 793) shows, the Member States have very different interests related to the production and consumption of biofuels in their national fuel markets, and hence they relate differently to the development of a common EU biofuels policy. Further, since the Council prefers to make their decisions unanimously, the diverging interests of the Member States could be expected to block an ambitious policy regarding the promotion of biofuels in the Community. In this way, the organization criteria for the Council, which is favouring the promotion of national interests, is hindering the development of a common biofuels policy.

These targets are very ambitious considering that at the time of the adoption of this directive, the proportion of biofuels in the EU was very low. Indeed this is the first directive that is actually requiring the Member States to promote biofuels. The earlier biofuels policy had not had a common approach from the Community level. The biofuels were promoted through legislation where the Community level let the Member States favour biofuels in their national markets. The regulation in the 1980s, the Member States were asked not to hinder the use of biofuels, through the directive on mineral oil from agricultural sources. This is hardly a promotion at all, as the regulation is solely intending to secure that biofuels are given an opportunity on the market. In the 1990s, the Member States were made able to exempt biofuels from taxation through the directive on excise duties on mineral oils. This regulation is not of an especially active promotion, as the directive only supplies the Member States with the possibility to exempt biofuels if they wish, and only after a comprehensive application process. Through the Biofuels Directive, the policy towards the promotion of biofuels was given a completely different scope. This directive is actively promoting biofuels, and the Member States are requested to favour biofuels in their national legislation. The passing of this directive represents therefore the breakthrough for the biofuels policy of the EU.

4.3.2 Environment, Energy and Rural Development

The basis of appeal of biofuels, as stated in the Biofuels Directive, is that an increased use of biofuels will be a measure needed to comply with the Kyoto Protocol and in order to decrease the Community's dependence on imported oil. Further the promotion of biofuels for transport is part of the strategy to promote renewable energy in general (The European Parliament and the Council 2003b: 42).

> *Greater use of biofuels for transport form a part of the package of measures needed to comply with the Kyoto Protocol, and of any policy package to meet further commitments in this respect. (…) Increased use of biofuels for transport (…) is one of the tools by which the Community can reduce its dependence on importer energy and influence the fuels market for transport and hence the security of energy supply in the medium and long term* (The European Parliament and the Council 2003b: 42).

The Commission's goal with the proposed directive was the successful development of the biofuels industry of the Community. To provide it with the possibility for an experience based technological development, without this leading to drastic changes in the energy market in the short run. The Biofuels Directive is a tool to provide the industry with a stable market, and hence providing it with the possibility to expand rapidly and as far as possible. The motivation is related to environmental concerns, concerns for energy security and for the diversification in agriculture (The European Commission 2001c: 7). The Commission has a practical approach to the promotion of Biofuels. The directive is promoted to give the biofuels industry of the EU a fair chance to develop, and this is promoted in a straight forward way, without much reference to problematic sides of these fuels. This approach to biofuels should be related to the Commission's role as an initiator, which will foster an ambitious approach, and its functional organizational criteria which will foster a practical or technical approach to the biofuels policy. The Commission is not exposed for the ethical sides of biofuels as the organizational criteria do not reveal these sides for the Commission (Egeberg 2004: 11).

The European Parliament has an environmental focus in its opinion on the proposed directives. The environmental benefits of biofuels are framed as the most important benefits of the biofuels policy, but at the same time these benefits are questioned. The main message from the Parliament regarding these proposals is that the promotion of biofuels must not mean the ruling out of other types of alternative fuels in the transport sector. The uncertainties related to the environmental benefits of the policy are stressed, and research and development is emphasized, but the effort needs to be put into all possible sources of renewable energy in

transport. A tool the Parliament proposes is environmental criteria for biofuels in the transport sector (The European Parliament 2002). These problematic sides of biofuels are also advocated by the EESC. In its opinion on the Biofuels Directive the committee questions the environmental balance of the fuels (The European Economic and Social Committee 2002: 7-10).

The European Parliament is advocating only the concerns for the environment in its opinion on these proposals, ignoring the other two concerns of the policy. Yet the environmental concerns are not promoted in a straight forward way, as the environmental benefits of the products are questioned. The European Parliament is concerned with the content of the policy; the environmental benefits that the policy may provide, and further the reassurance that these effects are really true. The policy development becomes, because of the multitude of related concerns, more complicated than it was when the motivation was only energy security. The increasing critical voice from the surrounding context is also a complicating factor as regards the biofuels policy. The dividing lines of the Parliament are ideological, which can be expected to foster the critical sides of biofuels, as conflict patterns inside are based on political differences. The promotion of both sides of biofuels, negative and positive, from the Parliament can be interpreted as a consequence of its organizational criteria (Egeberg 2004). Further, the Parliament has a very large part affiliated with the green environmental movement (Lenshow 2005: 312-18), and the strong emphasis on environmental concerns reflects this. The EESC does also have a large group advocating the environmental concerns from within, which explains the stressing of these concerns (Nugent 2010: 227).

Also rural development is mentioned as a motivation for the development of the biofuels policy. This concern is however not mentioned in the introduction paragraphs like the other concerns are, and rural development is therefore to a large extent framed as a less important motivation for the development of such a policy (The European Parliament and the Council 2003b: 43).

> *Promoting the use of biofuels in keeping with sustainable reframing and forestry practices laid down in the rules governing the common agricultural policy could create new opportunities for sustainable rural development in a more market-oriented common agriculture policy geared more to the European market and to respect for flourishing country life and multifunctional agriculture, and could open a new market for innovative agricultural products with regard to present and future Member States* (The European Parliament and the Council 2003b: 43).

These proposals from the beginning of the 2000s are the first time that biofuels and concerns related to the CAP are expressed this clearly. The CAP has at this point in time become more directed towards concerns for rural development on the expense of agricultural concerns. This part of the CAP is directed towards among other things the combating of the environmental challenges, and the production of renewable energy (Rieger 2005: 178). The CAP reform of 2003 must therefore be seen as part of the background for the Biofuels Directive. The 2003 reform brought with it a measure directly promoting biofuels productions in the Community. This was the carbon-credit, providing farmers with fiscal motivations for each hectare of arable land put into biofuels crop cultivation. These measures are regarded as very important for the growth in the production of biofuels in the EU (Eikeland 2005: 15-17). Through the implementation of the Biofuels Directive, the policy is supplied with its threefold basis for motivation.

The Biofuels directive is motivated from three different concerns, and the policy is at the same time made common for the EU. The connection to three different policy areas seems to have been beneficial for the development of a common EU policy. A threefold approach to the policy allows the policy to seek support from different angles, and since the argumentation becomes diversified is has a broader audience to speak to. Earlier the biofuels policy was framed in a relation to the concern for energy security, and as long as this was the case the development towards a common EU policy was slow. EU energy policy is without much earlier common policies because of the big differences between the Member States (Youngs 2011: 58). The rural development concerns and the environmental concerns however, are both connected to a large body of common European policies (Rieger 2005: 172; Lenschow 2005: 306). In this way it is plausible that the inclusion of rural development and environmental concerns to the policy together made the development of a common EU policy possible.

The threefold approach that is evident in the Biofuels Directive leads also to a more complicated policy. The three concerns will influence the balance and equilibrium of the policy. The policy is now more dependent on its surrounding context, as it now has more or less three different policy areas to relate to. In addition the biofuels are no longer seen as solely beneficial. The potential negative external consequences are taken into consideration (The European Parliament and the Council 2003b: 45).

4.3.3 The Right to Mobility

The directive is ambitious regarding the biofuels potential environmental, energy security and rural development benefits. Still, the quality of these fuels and their unproblematic introduction into the market is emphasized. The policy to promote biofuels should never compromise the functioning of the transport sector, and the concern for the individual's right to mobility is of higher value than the promotion of biofuels. The quality of the fuel is not a matter of compromises (The European Parliament and the Council 2003b: 42-5). The directive puts emphasis on a slow development, for the sake of the comfort of the citizens of the Community. The proportion of the total consumption is small and will continue to be so for some time. The consumers will therefore not notice much (The European Commission 2001c: 7).

The emphasis on the right to mobility is related to the energy security frame of the policy. Biofuels are in this way promoted because they are possible to produce inside the community, without leading to big changes in the structure and the collaboration in the transport sector. There is no scope for the curbing of mobility, or to apply tools directed to the prevention from traffic growth. The emphasis on the right to mobility is very strong in the EU. In an environmental perspective on transport, the issues relating to substitute fuels and the curbing of the growth in the transport sector are very close. This is not the fact in the EU, where the energy efficiency and the replacement of fossil fuels are the only policy suggestions applied (Franco et al. 2010: 662).

These are the practical concerns of the biofuels policy. The applicability of the fuels is the main reason for their introduction into the transport sector of the EU. The practical and economic sides to the biofuels policy were expected to be fostered through the Commission's functional organizational criteria (Egeberg 2004). The right to mobility is a strong value in the EU, and this concern is likely to have been supported by all the institutions.

4.3.4 Biofuels Targets not Accomplished

The Biofuels Directive obliges the Member States to report to the Commission on the measures taken to promote biofuels or other renewable fuels, their sales shares and on exceptional conditions affecting their ability to comply with the directive. Based on this the Commission shall draw up an evaluation report for the European Parliament and for the

Council on the progress of the Member States. If this report concludes that the indicative targets of 2% by 2005 and 5.75% by 2010 are likely to not be achieved, and that this is related to unjustified and non-scientific reasons, the national targets shall be addressed, and mandatory targets will be put upon the Member States (The European Parliament and the Council 2003b: 45-6).

The Biofuels Progress Report from 2006 evaluates the Member States' accomplishment of the Biofuels Directive and proposes changes in the policy based on this evaluation. The majority of the Member States did not accomplish their targets for 2005. The only Member States that met their reference value were Germany, with a 3.8% proportion of biofuels in the transport sector, and Sweden with a 2.2% proportion. The average Member State's accomplishment of their biofuels targets was 52%. In total the market share of biofuels in overall EU consumption of energy in the transport sector totalled at 1% in 2005, which is half of the target from the Biofuels Directive. If every Member State had reached their planned share, the Community would have had a 1.4% share of biofuels in 2005. On this background the Commission concludes that "the biofuels directive target for 2010 is not likely to be achieved [either]" (The European Commission 2006b: 5).

The fact that the Member States did not accomplish their goals implies that the targets set by the Commission, were too ambitious, and that the industry and the society were not ready for this intense promotion of biofuels for transport. This non-accomplishment is an important factor for the later development of the policy, as this leads to the development of mandatory targets for the policy, though the Commission's right to review the targets and propose new measures. The Commission is here supplied with additional powers to its usual right to initiative. The non-accomplishment of the targets from the Biofuels Directive gave the Commission a good starting point for the development of the biofuels policy towards mandatory targets.

Even though the Biofuels Directive is mild regarding the community level's possibility to force the Member States to comply, it supplies the Commission with a possibility to review the functioning of the targets, and the possibility to make the targets compulsory. Based on the Member State's lack of success in complying with the targets, the Commission states that the EU needs to send a clearer signal about their intentions regarding biofuels as an alternative fuel in the transport sector. The voluntary targets are not regarded as doing this. Therefore the Commission sees the need for mandatory targets regarding biofuels in the

transport sector (The European Commission 2006b: 8). The planned targets that the Member States proposed for their proportion of biofuels on their national markets, did not match the target from the Commission in the first place. This implies a planned under accomplishment of the Commission's biofuels targets by the Member States, and it is without doubt related to the voluntary character of the targets. Further, the Commission accepting the planned under-achievement shows that there was not much scope for increasing the Member States' ambitions.

4.3.5 Increasing Complexity of Biofuels Policy

The goal of creating rural development and to diversify the agricultural sector, has first and foremost been aiming towards matters inside the EU (Franco, Levidow, Fig, Goldfarb, Hönicke and Mendonça 2010: 667). The concern for developing countries is not entirely new to the policy, but their emphasis is much greater at this point in time. Though the communication from the Commission; *EU Strategy for Biofuels* the concerns for developing countries are introduced to the scope of the biofuels policy. The Communission wishes to ensure a policy that provides the same benefits to the rural communities in developing countries, as for areas inside the EU. Further, both social and ecological effects of the biofuels production in developing countries are considered. The development of the policy in a sustainable direction is stressed. The goal of the biofuels policy for developing countries are to generate positive economic and environmental effects, through creating employment, reducing the country's energy bills and providing a potential export product (The European Commission 2006a: 6-7).

Franco et al. (2010) relates the inclusion of developing countries in the scope of the biofuels policy, to the lack of agricultural land for biofuels production in the EU. This is because the concerns for developing countries were not introduced before the policy makers became aware that the ambitious targets that were put in place for biofuels were not possible to accomplish from production from inside the Community. The inclusion of developing countries to this policy does not mean that it has changed its scope towards development and cooperation policy. The inclusion of developing countries is by this argumentation made out of cynical and egoistic concerns, and not in order to create benefits for the world's poor.

> *That shift [towards concerns for developing countries] responded to industry projections that half the EU biofuels supply could come from imports by 2030. A*

> *parallel narrative promised that biofuels would offer opportunities for 'economic development' or 'rural development' in the global South, despite early evidence of destructive effects* (Franco et al. 2010: 667-8).

Another approach to explain this change towards an emphasis on the concerns for developing countries is to see it as a consequence of the criticism that surrounds the biofuels debate. The social effects of the production of biofuels, the expropriation of land areas, and the biofuels production's impact on food prices are gradually becoming known to the public. Because of the growing criticism the EU is required to justify its ambitious biofuels targets through the inclusion of developing countries in the scope of the policy. In this way the institutional approach can be used to interpret the change in the scope of the policy. It is the context's influence that has led to the EU changings its ways, and the introduction of the social concerns to the biofuels policy can therefore be seen as a punctuation in the biofuels policy's equilibrium, which was related to the concerns for rural development inside the EU (Peters 2005: 74).

Either way, regardless of the background for this change in the policy, the picture is more complicated after than prior to the introduction. This is because the wish to increase the possibility for rural development in Europe, and the aim for the biofuels policy to create benefits for development countries, are fundamentally contradicting. If the biofuels policy is to create rural development in Europe, it presupposes that the biomass for the production is obtained from inside the Community. On the other hand, if the policy is to create benefits for developing countries, it presupposes that the biomass is indeed imported from these countries. In this way the inclusion of these two concerns for the policy development, is complicating the picture of biofuels policy development in Europe even more, and it could be expected that the Commission would find it problematic to navigate between the different concerns.

The development of the policy is taking into consideration the problematic sides of the production, but at the same time the targets for the consumption are pushed forward and increased. The inclusion of another issue for the policy, does not affect the policy as it is promoted and implemented. This indicates a shallow shift in the policy, the concerns for developing countries are mentioned in relation to the biofuels promotion, but the implementation of the policy continues in the same way as always. This is an action that is treated in the institutional literature. The context's influence is experienced so strong for the institution, that it cannot resist making a change, in order to survive. At the same time the

institution does not have the resources to make this change. This leads to a situation where the institution makes the change that the surrounding context requires only on the outside. The inside of the institution is unchanged (Peters 2005).

4.4 The Renewable Energy Directive

In 2009 the EU Energy and Climate Change Package was adopted. Through this package the EU committed itself to reducing the green-house gas emissions by 20% compared to the 1990 levels and to increase the share of renewable energy in the total energy consumption of the Community with 20%. Related to this goal was a target of 10% renewables in the transport sector. Further the package contained a non-binding goal of 20% energy efficiency in primary energy consumption. All targets are aiming at the year 2020. The package consists of two different Directives, one on the promotion of the use of energy from renewable sources and the other to improve and extend the greenhouse gas emission allowance trading scheme of the Community (Behrens and Egenhofer 2011: 221-2).

The Commission communication *20 20 by 2020 Europe's climate change opportunity* presents a legislative framework, including mandatory rates for renewable energies at EU and Member State level. This communication contains the proposal for the Renewable Energy Directive to the Parliament and the Council. The emphasis is on the EU's ambitions of being a world leading actor in renewable energy, and that the Community needs to transform its society in a renewable direction sooner rather than later. This will lead to lower costs in the long run, and it is only in this way that the EU can accomplish its goal of serving as an global example on renewable energy (The European Commission 2008b: 2).

The Renewable Energy Directive establishes a common framework for the promotion of energy from renewable sources in the European Community. All legislation directed towards renewable energy is gathered here, and the Biofuels Directive is hence repealed (The European Parliament and Council 2009a: 16). Two main changes in the biofuels policy have occurred since the Biofuels Directive. First, the Renewable Energy Directive sets mandatory national targets, for the share of energy from renewable sources in the overall energy consumption in the transport sector. Second, sustainability criteria for biologically based energy sources are established (The European Parliament and Council 2009a: 27).

4.4.1 Agreement on Mandatory Targets at First Reading

The Renewable Energy Directive establishes a common framework for the promotion of all renewable energy sources in the Community. The directive further sets mandatory targets for the overall share of energy from renewable sources in the total energy consumption of each Member State. In addition the directive contains mandatory targets for the share of renewable energy from renewable energy sources in the transport sector (The European Parliament and the Council 2009a:7). The targets that are put in place for the transport sector are ambitious.

> *Each Member State shall ensure that the share of energy from renewable sources in all forms of transport in 2020 is at least 10% of the final consumption of energy in transport in that Member State* (The European Parliament and the Council 2009a: 28).

The adoption of the Renewable Energy Directive did not lead to the same debates as the adoption of the Biofuels Directive did. The proposal from the Commission was approved at the Parliament's first reading.

> *As an agreement was reached between Parliament and Council, Parliament's position at first reading corresponds to the final legislative act, Directive 2009/28/EC* (The European Parliament 2008).

The legislative procedure in use was the ordinary procedure, where the Parliament and the Council are equal in terms of power. The procedure includes as much as three readings, but if the Parliament and the Council comes to an agreement, the proposal is made a legislative act at the first reading (Nugent 2010: 315-19). Considering the mandatory character and the considerable size of these measures, it is strange that the directive is adopted this quietly. Especially when considering the Council's previous lack of ambitions regarding the promotion of biofuels.

Because of the intergovernmental character of the Council, this body is expected to promote the placement of competence at the Member State level (Egeberg 2004: 9). This was not the case in the adoption process of the Renewable Energy Directive. One explanation of this is that the need for the implementation of the biofuels targets were increasingly pressing, leading the Council to accept a Community level regulation of these concerns. This in order to make sure that the biofuels proportion is indeed increasing. It is also possible that powerful Member States with ambitions regarding biofuels were pushing this development ahead. The picture painted by Wiestenthal et al. (2009) revealed that many of the most powerful EU

Member States, such as France and Germany, had potential interests regarding the promotion of a common EU biofuels policy.

The ordinary procedure supplies the Parliament and the Council with equal amounts of power. It is therefore possible that the Parliament pushed the mandatory targets ahead, and that the Council had no choice to accept the targets. On the other hand, the Parliament was not the main promoter of biofuels when the Biofuels Directive was adopted in 2003. It is not easy to say whether or not these attitudes prevail. However the criticism in the context of biofuels is increasing and the Parliament is because of its political character expected to foster the critical sides of the policy (Egeberg 2004: 10). It is therefore likely that the Parliament is influenced by and advocates these concerns.

4.4.2 Biofuels for the Sake of the Environment

In the Renewable Energy Directive the environmental concerns are promoted as the principal goal of the policy, whereas the other two concerns are secondary.

> *The control of European energy consumption and the increased use of energy from renewable sources, together with energy savings and increased energy efficiency, constitute important parts of the package of measures needed to reduce green-house gas emissions and comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and with further Community and international green-house gas emission reduction commitments beyond 2012. Those factors also have an important part to play in promoting the security of energy supply, promoting technological development and innovation and providing opportunities for employment and regional development, especially in rural and isolated areas* (The European Parliament and Council 2009a: 16).

With this statement, there has been a shift in the framing of the policy to a more environmental focus. In the Biofuels Directive the concern for rural development was framed as less important, while the environmental concerns and the concerns for energy security were framed as the principal goals. It is hard to make inferences about why this shift happens, but the environmental focus could be related to a strong focus on these values generally in the society.

In the proposal for the directive, the Commission speaks of the twin goals for the biofuels policy, referring to the reduction in green-house gas emissions, and the improvement of the energy security of the Community. In this way, the concern for rural development is clearly

subordinated, while the concerns for energy security and the environment are promoted as earlier (The European Commission 2008b). The shift towards a stronger environmental focus of the policy has therefore been a result of the consultation process. The environmental concerns are very important to the EU, as the Community has ambitions of being a world leader on environmental issues. The environmental concerns could be regarded as the most trans-European issue of the policy, as the environmental threat does not relate to the nation state's borders, and a framing of the common biofuels policy towards these concerns could therefore be expected to be beneficial.

Further, the common EU policy on biofuels policy, as presented in the Renewable Energy Directive, seems to have benefitted from the three motivations for the biofuels promotion. The directive speaks in this way to three different policy areas, and the potential for support has therefore greater potential. In this way the three concerns connected to the policy created the scope for the development of a common EU biofuels policy.

4.4.3 The Transport Sector's Special Role

The Renewable Energy Directive sets targets and measures for the overall energy consumption of each Member State. These targets are mandatory, but they are differentiated based on the Member States' current use of renewable energy and potential for growth. E.g. Sweden has a target value of 49% for 2020, whereas Malta has a target value of 10%. Together the efforts of each Member State shall sum up to a 20% share of renewable energy in the Community's overall energy consumption (The European Parliament and Council 2009a: 28). The consultative bodies are generally positive towards the target of a 20% share of renewable energy in the overall energy consumption of the Community (The European Economic and Social Committee 2008: 46), but this is not the case for the targets for the transport sector put upon the Member States which are much more contested.

The transport sector is supplied with a special role by the Renewable Energy Directive. Each Member State shall provide for a 10% proportion of renewable fuels of their total fuel consumption on their national markets, regardless of their previous knowledge or biomass potential. This is based on the argumentation that the transport sector is the fastest growing green-house gas emissions source of the EU, and an assumption that because of the disperse use of biofuels, the development of these fuels will be difficult if a special effort is not made (The European Parliament and Council 2009a: 28).

> *Each Member State shall ensure that the share of energy from renewable sources in all forms of transport in 2020 is at least 10% of the final consumption of energy in transport in that Member State* (The European Parliament and Council 2009a: 28).

The EESC does not support this line of argumentation, and regards the substitution of fossil fuels with biological derived fuels in the transport sector as "one of the least effective and most expensive climate protection measures" (The European Economic and Social Committee 2008: 43-4). The use of renewable electricity in the transport sector is regarded as much more beneficial, at least until the next generations of biofuels are ready for the commercial market. (Committee of the Regions 2008: 15; the European Economic and Social Committee 2008: 43-4). The future transport sector is not, they argue, based on the internal combustion engine and private cars, but on public environmentally friendly transportation modes. Where the use of private cars is necessary it is much more reasonable to obtain the energy from renewably produced electricity, rather than liquid biofuels. Further they promote investment in a policy of "traffic prevention" (The European Economic and Social Committee 2008: 46).

The suggestion promoted from the EESC of a policy to curb the growth in the transport sector is daring in the EU biofuels for transport context. An important concern related to the development of the biofuels policy has always been that curbing mobility is not an option. Another of the main areas of focus when debating suggestions for biofuels policies is the applicability of the fuel types without having influence on the individual's ability for mobility. Never before, when the promotion of biofuels has been debated, have there been any suggestions towards a policy aiming at curbing mobility. According to Franco et al. (2010: 662) the EU biofuels policy is a way of "ensuring further growth of the transport sector."

The Commission's ambitions were even more considerable than what is expressed in the final directive. In its Communication *20 20 by 2020 Europe's climate change opportunity* it is expressed a goal of 10% renewables in the transport sector from biofuels alone:

> *A specific effort is needed to achieve green-house gas emissions reductions and improved security of energy supply in the transport sector, which is why the European Council chose to fix a specific minimum target for sustainable biofuels of 10% of overall petrol and diesel consumption* (The European Commission 2008b: 7).

The initial proposal has been scaled down during the adoption process, and should be related to the negative perception of biofuels within the consultative bodies. Even though the EESC

and the CoR does not have formal power, their views make out a valuable illustration of the arguments present in the debates. The Commission's ambitions should be seen as the result of its supranational and functional organization. The functional organizational criterion promotes a technical approach to biofuels, and blocks the ethical sides to the policy from entering (Egeberg 2004). The supranational character fosters the placement of competence on the EU level (Pierson 1996).

4.4.4 Sustainability Criteria

The renewable energy placed on a Member State's national market, will only count towards the renewable energy obligations of that Member State if it complies with strict criteria regarding its production. For the biofuels in the transport sector, the directive sets up a set of sustainability criteria that the fuels have to comply with in order to count towards the Member States' renewable energy obligations. This is in order to rule out their potential negative external consequences. The sustainability criteria of the Renewable Energy Directive relate both to the ecological concerns and to the social concerns of biofuels (The European Parliament and Council 2009a: 36).

First, the green-house gas emission savings from the use of biologically based fuels compared to fossil fuels shall be at least 35%, gradually increasing to 60% by 2018. Second, these fuels shall not be made from biomass obtained from land regarded as valuable considering biodiversity, e.g. primary forests or areas with endangered species, from areas with high carbon stock, e.g. wetlands or continuously forested areas, or from peat land areas. Last, the production of biologically based fuels has to be in accordance with the CAP. It is clearly stated that only products fulfilling these criteria shall be taken into account as renewable energy sources towards the mandatory biofuels target (The European Parliament and Council 2009a: 36-7).

The social concerns that the Renewable Energy Directive speaks of are related to the possible impact the use of biofuels might have on the availability of food to affordable prices for people in developing countries, to land-use rights and a series of Conventions of the International Labour Organizations with implications on the rights of the labour force of the country where the production is carried out. These criteria are not mandatory in contrast to the ecological criteria in the previous paragraph. The Commission is responsible to monitor the development, and report to the Parliament and the Council on this subject, but the compliance

with these criteria does not affect whether or not the fuel in question counts towards the Member States' environmental obligations (The European Parliament and Council 2009a: 38).

The CoR and the EESC are both generally negative towards biofuels in the transport sector, because of the external negative consequences of the production. The sustainability criteria are therefore welcomed, but they are considered as not being comprehensive enough. The use of renewable electricity in the transport sector is regarded as much more beneficial, at least until the next generations of biofuels are ready for the commercial market. Especially the environmental concerns from the use of biofuels are emphasized, but also social concerns, such as the role biofuels might play in rising food prices, are mentioned (Committee of the Regions 2008: 15; the European Economic and Social Committee 2008: 43-4).

According to the EESC the biofuels fails to give any of the promised positive impacts. The green-house gas emissions savings from biofuels are insignificant, the use of biofuels produced from imported biomass will not improve the Community's energy security and the production of biofuels creates hardly any jobs in Europe (The European Economic and Social Committee 2008: 47-8). The Committee insists on using the term agrofuels in-stead of biofuels. This is because the pre-fix bio gives normatively positive associations regarding the environment, and this is not in line with the Committee's impression from the biofuels of the real world. In the Committee's opinion the benefits of the policy does not compensate for the negative external consequences, and one should therefore be cautious to promote biofuels for transport at the scale that is done in the EU at that time (The European Economic and Social Committee 2008: 43-4).

The consultative bodies' opinions on the proposal should be related to their political and ideological organization principle (Egeberg 2004). The EESC represents the special interests of the EU. This body includes members from among other groups different national Workers Unions (Nugent 2010). It is possible that the promised creation of jobs in the Community has led to the negative view on biofuels in the EESC. Another explanation could be the members' solidarity with workers in developing countries, who could be in danger of being exploited. The CoR is organized based on political parties, and the fostering of the ethical sides of biofuels is therefore expected from the organizational criteria of the committee (Egeberg 2004). By the adoption of the Renewable Energy Directive, the biofuels were essentially

contested globally related to their negative external consequences, and these concerns were fostered as a result of the CoR's dividing lines.

The sustainability criteria represent a step towards the use of sustainable biofuels. The emphasis on the sustainability of biofuels, and the adoption of these complex sustainability criteria, shows that the EU is seeking to promote biofuels in a more sustainable way than earlier. The criteria cover to a great extent the different areas of criticism that surround biofuels, e.g. the exploitation of labour forces in development countries and biofuels possible impact on food prices, and ecological concerns for the green-house gas emissions as well as the degradation of soil and water. On the other hand the social concerns for the production of biofuels are not taken care of at the same extent as the ecological concerns. The concerns related to the biofuels impact on food prices and the exploitations of labour forces are not mandatory in order for the biofuels to count towards the measures. The backdrop of the adoption of the biofuels directive is one where food prices have doubled in few years, and there are many who blame these changes on the production of biofuels (The Guardian 2011). It is therefore strange that the social concerns for biofuels production are not promoted in the same mandatory way as the ecological concerns are. The reason given in the adopted directive is that the measurement of these factors are very difficult, and that these concerns therefore are better handled in a non-mandatory way and through supervising their impact (Franco et al. 2011: 6).

The new emphasis on the sustainability of biofuels does not lead to a promotion of biofuels at a lesser extent. Quite on the contrary, the target of 10% renewables in the transport sector from biofuels alone is very ambitious. In the initial proposal from the Commission the target was even 10% biofuels alone, not including other types of renewable energy. Biofuels are no longer seen as a one sided positive thing, but rather the industry is experienced as one that has to be constrained and supervised, in order not to have negative external consequences. The sustainability criteria are seen as adequately securing the sustainability of biofuels. The food crisis of 2008 and the other social concerns related to the biofuels policy, did not have a strong enough influence, to change the development in the EU towards other renewable energies. This can be seen in relation to the high oil price at the same time. From 2005-2006 the price on oil doubled (The World Watch Institute 2007: 8). This strengthened the EU's incentive to secure its energy supply, among other means through biofuels.

The sustainability criteria in the Renewable Energy Directive are motivated from a need to legitimate the aggressive promotion of biofuels in the Community. The institutional context of the policy is pushing the concerns forward, and the EU does not have a choice but to implement such concerns (Peters 2005). The environmental concerns are in addition supported by the green Parliamentary wing (Lenshow 2005). The non-mandatory character of the social sustainability criteria is related to the fact that there is no channel present for their promotion, to the same extent as the environmental sustainability criteria. According to Franco et al. (2010: 6) were the social sustainability criteria promoted as mandatory as well, by a Parliamentary committee. This was rejected however, by the Commission, because such criteria were said to intervene with WTO trade rules.

Next generations of biofuels

The next generation biofuels are given a special treatment in the Renewable Energy Directive. The biofuels produced from waste, residues, non-food cellulosic material and lingo-cellulosic material shall be counted twice compared to other types of biofuels in relation to the Member States' renewable energy obligations (The European Parliament and Council 2009a: 41). Also the biofuels produced from waste and residues are treated differently towards the sustainability criteria. The fuels derived from these sources need only fulfil the sustainability criteria of green-house gas emissions (The European Parliament and the Council 2009a: 36). The CoR and the EESC both promote the development of next generations of biofuels, and research and development devoted towards environmental and social sound biofuels (Committee of the Regions 2008: 15; the European Economic and Social Committee 2008: 43-4).

This positive discrimination of next generation biofuels, and biofuels from waste, shows a political wish to promote these types of fuels to a greater extent than the first generation fuels. Through this measure one is seeking to change the composition of the types of biofuels that are used in the Community. On the other hand, the directive goes very far in giving these advantages, even as far as to compromise the sustainability criteria, when some types of fuels does not need to fulfil all of the criteria in order to count towards the target values.

A general assumption regarding the promotion of biofuels in the EU have been that the first generation biofuels are put in the market regardless of the negative external consequences that they involve. The introduction of first generation biofuels is believed to an easier introduction

of the next generation biofuels when they are commercially available for the market. This line of thought is criticized based on the argument that the first generations' hegemony in the market, leads to a more difficult entrance for the next generations of biofuels (Eggert, Greaker and Potter 2011). The favouring of the next generation biofuels in the Renewable Energy Directive should be seen as a consequence of the critic towards the first generation biofuels.

4.4.5 The New Equilibrium of the Biofuels Policy

The adoption of the Renewable Energy Directive was surprisingly conflict free, as the Parliament and the Council made an agreement already at the first reading. This is surprising considering the content of the directive. Through this legal act, mandatory and considerable targets for the proportion of biofuels on the national markets are provided. The Council supports the directive despite intergovernmental character, and its history as the brake to the development of the biofuels policy. This situation is completely different from the one of the adoption of the Biofuels Directive in 2003, where the Council was able to effectively dispose of the mandatory targets that were proposed by the Commission. By doing this the power was allocated to the Member States, which in turn led to the adoption of a directive without any constraints put upon the Member States. It is not possible to get insight into the process that led to the agreement between the Parliament and the Council on the Renewable Energy Directive from the data available. Even so it seems like the EU biofuels policy has come to a state of internal equilibrium. Earlier the development of this policy have been characterized by the Council's strong opposition against placing constraint upon the Member States, this seems to not be the case anymore. Through the agreement on the mandatory targets, the Council's role as the brake to the development of the policy has come to an end.

A collective approach including all the EU level institutions will without doubt be beneficial for the further development of the EU biofuels policy, as there will be no institution to slow down the development. On the other hand, two CAP-measures, that have been important for the development of the biofuels policy, are abolished through the CAP "health check" of 2008. Both the set-aside measures and the direct energy crop support are abolished from 2010 (The European Commission 2012). The effect from the abolishment of these two measures will without doubt have influence on the possibility to accomplish the targets from the Renewable Energy Directive. Further, up until now, the EU does not have a good record of accomplishing its targets. Neither of the targets from the Biofuels Directive were met.

Further, OECD-FAO 2011: 82) regards the probability of the EU to accomplish their targets for 2020 to be relatively small. This is despite the mandatory character of the Renewable Energy Directive.

The EU biofuels policy has earlier been characterized by a strong contingence on the surrounding context. This was evident e.g. though the adoption of the sustainability criteria in the Renewable Energy Directive. The criticism of biofuels in the surrounding context is ever growing, and its influence is considerable also after the adoption of this directive. The Commission was in 2009 encouraged by the Council and the Parliament to investigate the environmental consequences of the use and production of biofuels (Al Riffai et al. 2010). The publication of these reports led to speculations about a change towards a less progressive EU biofuels policy (Reuters 2012).

An Institutionalized Development

The establishment of the EU biofuels policy in the 1980s is clearly marked by the insecure energy situation of this time. The policy area is affected by this frame through its development towards a common EU policy in the 2000s. Moreover the policy area becomes increasingly complex because new concerns are introduced to the policy; environmental concerns are concerns for rural development. The institutional setting at the EU level is influencing the policy as it evolves, and the surrounding context is also an important influencing factor.

5 Overview and Final Conclusions

The development of the common biofuels policy of the EU, as accounted for in this thesis, is a story mainly treating four different factors. It is a story of *policy innovation*, as a new policy area is born. In the world context the biofuels were given emphasis already from the middle of the 1970s. On the EU scene however the policy area is not an issue before in the middle of the 1980s. It is also a story treating the *European integration process*. Over the years this policy area develops to a common EU policy. Through the adoption of the Biofuels Directive in 2003 the policy is made common for the EU, and through the Renewable Energy Directive in 2009 the Member States are obliged to promote biofuels on their national markets. The EU level is treated as *institutionalized* in this thesis. The thesis shows how the different institutions on Community level promote certain sides of the policy, and in the end influences the final outcome. Biofuels as a policy area is characterized by complexity, and this makes these mechanisms even stronger. The story is also one where the development at times is very much contingent on the world *context*, because the EU as an institution is dependent on its environment.

From the institutional approach some expectations were expressed regarding the empirical account. The supranational institutions were expected to promote the integration process, while the intergovernmental Council was expected to slow this process down, and to advocate the Member States' interests. The Commission's approach to the policy field of biofuels was expected to be technical and economic, while the Parliament was expected to promote the ethical sides to biofuels and especially the environmental concerns. The development was also expected to be contingent on the connection to either environmental policy, rural development policy or energy policy. The development was also expected to be dependent on the surrounding context.

5.1 A Complex Common Biofuels Policy

The first EU legislation related to biofuels for transport was adopted in 1985, through a Directive on crude oil savings in the transport sector. The constraints from this directive upon the Member States, was not very strong, and the regulation cannot really be regarded as a common European policy. The directive is merely requesting the Member States "not to hinder" the use of biofuels in their national markets. The directive has a strong focus towards

the quality and applicability of these fuels. They are eligible as alternatives to crude oil because they can be introduced more or less without any changes in the transport sector. Their introduction in the fuel market will in this way not be of any hindrance to the EU citizen's fundamental right to mobility. This directive from 1985 represents a straight forward promotion of biofuels. The basis of appeal of the biofuels is their applicability in the transport sector. This is a consequence of the one sided focus of the directive regarding the outcome of the policy. The motivation is the energy security situation of the Community, and there are no interfering concerns.

In 1992 the Directive on excise duties on motor oils was adopted. This directive aims at supplying the Community with a set of rules regarding the taxation of motor oils, and it does not contain any higher or wider political outcome goals. Through this directive the Member States were allowed to exempt biofuels from taxation in their national markets, after going through a complicated application process. This mode of regulation meant that any Member State who wished to promote biofuels on their national markets, were allowed to do so, and there were no constraints put upon the Member States who did not. The flexibility of the system, together with the complicated bureaucratic process, fostered a chaotic regulation of biofuels. This was illustrated by the incident with the French measures, where the different EU level institutions interpreted the same directive in widely different directions, regarding France's ability to exempt their biofuels from taxation on their national markets.

In 1998 the EU and its Member States signed the Kyoto Protocol. At the same time environmental concerns were increasing their importance as an EU policy area. This is revealed through the rapid development of the common environmental policy, after the adoption of SEA in 1986. Together these events lead to the connection between environmental concerns to the biofuels policy in the latter part of the 1990s. The introduction of a second concern for the biofuels policy complicated the policy area, as the development were now contingent upon the development in two different areas with different contexts, scientific literature and lobby groups.

The Biofuels Directive from 2003 is the first common European policy regarding the promotion of biofuels. The directive contains ambitious targets for the proportion of biofuels in the transport sector, and requests the Member States to secure a certain amount of biofuels in their national markets; 2% by 2005 and 5.75% by 2010. These measures can be given much credit for the strong growth in the biofuels production and consumption in the EU during the

beginning of the 2000s. The Biofuels Directive promotes biofuels based first and foremost on the concerns for the environment and for energy security, but the directive also includes rural development as part of the background for the policy, which complicates the matter further.

The measures from the Biofuels Directive were ambitious, and their implementation could have had a considerable impact on the world market of biofuels. These measures were however of an indicative character, and they were not. The non-accomplishment of the Biofuels Directive led to a consideration of stronger measures towards the Member States, in order to secure the accomplishment of the goal of the policy. The Renewable Energy Directive of 2009 imposes mandatory targets for the Member States regarding the proportion of biofuels on their national markets. These targets are ambitious, 10% renewable energy including biofuels by 2020, and their accomplishment would put the EU in a very central position on the biofuels world scene.

The Renewable Energy Directive does also contain a set of sustainability criteria for biofuels. This scheme has been described as the most comprehensive scheme in the world related to the sustainable production of biofuels. The directive also grants privileges for next generations of biofuels. The implementation of the sustainability criteria in the policy is a result of the criticism of this policy in the political debates. Moreover, the directive includes all three concerns, environment, energy and rural development, to its approach to the policy. The environmental concerns are however framed as the primary concern for the policy, while the other two are downplayed. This change in priority can also be connected to influence from the context, where environmental concerns are both modern and politically correct. The breakthrough for the common European policy for the promotion of biofuels was made by the adoption of the Biofuels Directive in 2003. However, the Renewable Energy Directive's mandatory targets represent a policy containing more constraint on the Member States, and this directive does therefore represent an even bigger step towards a common European biofuels policy than the Biofuels Directive did.

5.2 Inferences from Theory

The development where the Community level is increasing its competence, and the policy area becomes increasingly complex, has been constrained and promoted, by the institutional characteristics of the EU and by the policy context.

5.2.1 An Institutionalized Development

According to Pierson (1996) the EU institutions have developed beyond the scope of the roles that they were initially intended, and they are constantly seeking to increase the power of the EU level at the expense of the Member State level. The institutions have in this way the possibility to influence the development of EU policy, beyond the roles within the governmental structure. The supranational institutions; the Commission and the Parliament, will be promoters of the integration process, while the Council, which is an intergovernmental institution, will be reluctant towards this development.

Further, the organizational criteria of the institutions will influence the policy as some concerns are channeled in and others are channeled out. The EU level institutions are organized according to different criteria, which affect their way of relating to a policy area. The Commission is organized based on a set of functional criteria, which in turn leads to the fostering of concerns that correspond to these dividing lines, e.g. economical and technical considerations. The Parliament is organized based on political dividing lines, which fosters ideological and ethical concerns because these are the contradictions likely to occur when different political views meet. The Council is an intergovernmental institution, which means that national interests are advocated, hence concerns related to the Member States are fostered (Egeberg 2004).

The institutions foster different interests, and hence their relative power is relevant for the outcome in policy. In the legislative process, this is decided through the choice of legislative procedure, which supplies the different institutions with a certain amount of power. This will again influence the outcome in policy, as this relationship decides which of the different concerns that are promoted with the most strength. Further, the definition of a policy area as national or EU level competence is significant for the outcome of the policy. A framing of a policy towards a policy area that does not have the status as EU competence is not suitable for a strong regulation as the outcome.

The Commission has been a driving force behind the development of the biofuels policy, through continuously proposing new and ambitious modes of promoting biofuels. This is especially evident in the Commission's tireless promotion of tax exemptions for biofuels, which ended up as part of the Energy Taxation Directive in 2003. By the adoption of this directive the Commission had been trying to introduce such a policy for more than 10 years

through at least three proposals. These efforts were continuously blocked by the Council. Other examples of the Commission's ambitious promotion of biofuels are; the target of 10% from biofuels alone in the initial proposal for the Renewable Energy Directive, and the proposal for mandatory targets in the Biofuels Directive. The Commission's ambitions regarding the promotion of biofuels are connected to its initiating role in the EU system. The Commission is by definition the only institution at the EU level with a right to promote new policy. Moreover the Commission's ambitions can be related to its organizational characteristics. The functional organization criteria are fostering a technical approach to the promotion of biofuels. This is a situation where the ideological and ethical sides of the policy do not have the same conditions to prosper. In this way the negative sides of biofuels are not exposed to the Commission, and its ambitions are not curbed by these concerns.

The Parliament has had a supportive role in relation to the Commission's ambitious plans for the biofuels promotion, as the proposals have been welcomed and supported. This is related to the Parliaments supranational role in the EU system. However, the Parliament's approach to biofuels has been less directed towards the economic and technical sides of biofuels. The approach has been mostly focused on the environmental benefits of biofuels, rather than the energy security and rural development concerns. Further, the Parliament has focused also on the potential negative external consequences of biofuels, and especially towards ensuring the environmental benefits of the policy. This focus on the effects of the implementation of the policy and ensuring the proposed benefits in practice can be related to the Parliaments organizational characteristics. The Parliament is a political institution, with political and ideological dividing lines as the structure for collaboration. This fosters the promotion of different sides of the policy e.g. the negative ecological consequences. In addition the Parliament contains a large group of politicians sympathizing with the green political movement, which leads to a focus on the environmental sides to biofuels, in-stead of the energy security and rural development concerns. This is exemplified through the Parliament advocating the potential environmental benefits of the biofuels policy in the adoption process of the motor oils from agricultural sources directive in 1985.

The Council has been the brake to the development of the biofuels policy. When the Commission has proposed the placement of competence at the Community level, the Council has used its powers to redirect that power to the national level. This is especially evident in the process of adoption of the Biofuels Directive, where the Commission proposes mandatory

targets for the proportion of biofuels in the national markets, while the Council changes the targets to indicative targets. This resulted in a Member State controlled policy, and lead to a non-accomplishment of the targets in the directive. The Council's actions in the development of the EU biofuels policy are related to its intergovernmental character. The Council is organized based on a territorial criterion. This leads to collaborations where Member States' interests are advocated, which in an EU context often leads to efforts towards downplaying the integration process.

The characteristics of the EU level institutions have channeled, all but one, of the features of the policy area. The social critique of biofuels, e.g. the production's impact on food prices, the exploitation of poor farmers and the question of Land Grabbing, have not been taken into consideration in the development of the policy. These concerns have increased their importance, as part of the context of biofuels, throughout the period studied, but they have not entered the context of the policy of biofuels. In the development of the policy, there has not been a channel for these concerns. The Parliament advocating for the environmental sustainability of biofuels has been able to introduce these concerns as an important part of the policy, and the introduction of social sustainability concerns would therefore have been possible. On the other hand, the environmental concerns were also backed by the Kyoto Protocol, and the social concerns for biofuels lack this legally binding agreement. Still, the food crisis in 2008 did raise the relevance of these issues, but without having any considerable effect on the policy development.

The consultative committees are very critical to the biofuels measures promoted in the Renewable Energy Directive. Biofuels are not regarded as an eligible source of energy, and other fuel types are promoted on the expense of biofuels. The EESC is especially critical in its opinion, and the argumentation is clearly affected by the criticism surrounding biofuels. It these consultative bodies had had more power in the policy processes it is possible that the social concerns would have had a channel for entering biofuels policy area.

EU Institutional Setting

As shown in the previous paragraphs, the institutions of the EU foster different concerns of the policy. The relative power between the Institutions will in this way have impact on the outcome in policy, because the relationship between the institutions will decide which concerns that are advocated with the most strength in the policy process.

The Commissions' initiation role provides it with much power and influence, as it has the power to define the starting point for the policy. This power is great and sovereign; there is no EU legislation without the Commission's initiative. However, through collaboration between the institutions, the Parliament and the Council may communicate their views on the development of new policy, and through recent treaty revisions they have been given some competence towards initiation. In addition there have been put in place initiatives where the common EU citizen can initiate policies. The initiative powers of the Commission are still considerable and more or less complete (Nugent 2010). The Commission has been ambitious towards the policy area of biofuels since the beginning, and the Commission's role in the EU system has therefore been beneficial for the development of a common biofuels policy.

The two legislative branches of the EU, the Parliament and the Council, have had different approaches to the development of the common biofuels policy. Their relative power has therefore influenced the development in policy, through these institution's actions towards the Commission's initiatives. The Parliament has generally had a role as a promoter of the Common biofuels policy, especially regarding the environmental concerns of the policy. The Council on the other hand has been more reluctant towards the development of the common biofuels policy. The relationship between these two institutions has therefore been of importance for the development of the policy. Traditionally, the legislative power of the EU has been located with the Council. Throughout the time period of this study however, the Parliament has been increasing its power at the expense of the Council, and by the adoption of the Lisbon treaty the Parliament gained full equality with the Council in legislative questions. Thus influence of environmental concerns in legislation has increased.

Three policy areas

The biofuels policy is connected to environmental policy, energy policy and rural development and agriculture policies. These policy areas have different histories as regards their status at the EU level. The common agricultural policy is one of the most integrated of the EU policy areas, and the environmental policy of the EU was established through the SEA in 1986. The energy policy of the EU still has much potential before it can be regarded as a common policy. The initial steps towards an EU policy on biofuels were solely motivated from energy security concerns. This was also the case throughout the 1990s, but after the Kyoto Protocol, the environmental concerns were included in the policy, and not long after

the rural development concerns were included as well. The Biofuels directive, which is regarded as the first common EU policy on biofuels, is the first occasion where all these three concerns are mentioned as motivations for the biofuels policy.

The analysis has shown that the development of the common European biofuels policy was slow as long as the framing of the policy was solely based on energy security concerns. This observation is related to the lack of a common energy policy. The environmental and rural development concerns were included in the Biofuels directive and this directive was also related to the development of a common EU policy. The environmental and agricultural concerns on the other hand are both supplied with common European policies, and it seems like the inclusion of these concerns contributed to a common biofuels policy.

5.2.2 A Development of Punctuated Equilibrium

Institutionalism sees institutions as being in a state of equilibrium, and that their developments are characterized by path dependency and inertia. If change happens it is expected to be slow and modest. These approaches do however also open up for sudden changes through the concept of punctuated equilibrium. The institution is seen as surrounded by a context, which in certain circumstances will be able to influence the institution and create change. In order for the influence to create change in the institution, it will have to be strong enough to counteract the path dependency the institution suffers from (Peters 2005).

This thesis has accounted for three incidents in the development of the EU biofuels policy, where the context's influence can be understood using the concept of punctuated equilibrium. The first case is the adoption of the very first directive related to the biofuels policy from 1985. This directive is considerably influenced by the world context where the 1970s oil crisis is a leading factor. The oil crisis of the 1970s caused the EU to restructure its energy policy, and this lead in turn to an increased interest in biofuels for transport. These events establish an energy security focus for the policy.

The Kyoto Protocol can also be seen as a punctuation of the established equilibrium of the policy. The policy had until the end of the 1990s an energy security concern as the only goal. With the EU implementation of the Kyoto Protocol, the policy changes towards environmental benefits as the outcome of the policy, even though the impact is not immediately evident. The Biofuels Directive from 2003 promotes the environmental concerns

just as strongly as the energy security concerns, and through this directive the policy has been supplied with a new goal. The environmental concerns are promoted even stronger in the Renewable Energy Directive, where this concern clearly is given precedence over the other two concerns of energy security and rural development.

Last, the introduction of the sustainability criteria in the Renewable Energy Directive is also an action that can be connected to the context of the policy. The critical voices related to biofuels were increasing at this point in time, and the environmental benefits of the use of biofuels in the transport sector were questioned. The sustainability criteria of the Renewable Energy Directive is a means to ensure the sustainable production of biofuels, and can be understood as the result of the criticism of these fuel types in the context. The backdrop for the implementation of this directive was also marked by a global food crisis, for which biofuels were given much blame. In addition the world was entering into a severe economic crisis and the oil prices were higher than ever in relative figures. The social sustainability criteria of biofuels can be connected to the critic regarding biofuels' impact on food production. These criteria are however not mandatory in contrast to the ecological criteria. This characteristic of the social concerns should be seen in relation to the economic crisis and high oil price, as the following up of such criteria would increase the price on biofuels considerably, and hence lead to a lesser energy security impact.

5.2.3 Summing Up and Looking Ahead

First and foremost this thesis has shown how the policy area of biofuels is established more or less as a direct consequence of the insecure energy situation in the beginning of the 1980s, and that the policy area develops from a Member State to a Community level competence over the years. Secondly, the development has been of a policy that is becoming increasingly complex as new concerns are introduced to the policy. The story has also been one where the institutional characteristics of the EU system are influencing the development of the policy. Both regarding the placement of power either on Member State level, or at Community level, and regarding the framing of the policy in connection to the three policy areas to which it relates. Lastly the story treats the influence from the biofuels context through e.g. the implementation of the Kyoto Protocol in 1998.

The integration process regarding the biofuels policy in the EU is now complete. Through the Renewable Energy Directive the Member States are supplied with ambitious, mandatory

blending mandates. Further the adoption of this directive was conflict free. The Council did not influence the policy towards Member State power over the targets. The biofuels policy seems now to be in a state of equilibrium in the EU. However, the development of the EU policy on biofuels has proved to be dependent on the surrounding context. All major changes that have been detected in the policy have proved to be results of impact coming from the outside. The criticism regarding the negative external consequences from the biofuels policy is growing. The EU has already showed that the policy is contingent on this criticism, and a future policy can be expected to be contingent on this criticism, e.g. in form of further development of the sustainability criteria from the Renewable Energy Directive.

Literature

Ajanovic, Amela (2011): "Biofuels versus food production: Does biofuels production increase food prices?" *Energy* 36(4): 2070-2076.

Al Riffai, Perrihan, Betina Dinaranana and David Laborde (2010): *Global Trade and Environmental Impact Study of the EU Biofuels Mandate*. Final report. Atlass Consortium. <http://trade.ec.europa.eu/doclib/docs/2010/march/tradoc_145954.pdf> [Downloaded: 20 of May 2012]

Andersen, Svein S. (1997): *Case-studier og generalisering. Forskningsstrategi og design.* Bergen: Fagbokforlaget.

Andersen, Svein S. and Kjell A. Eliassen (2001): *Making Policy in Europe.* Thousand Oaks, CA: SAGE Publications.

BBC News Europe (2011): *Germany: Nuclear power plants to close by 2022*. Online article: 30 of May 2011. < http://www.bbc.co.uk/news/world-europe-13592208> [Downloaded: 20 of May 2012]

Behrens, Arno and Christian Egenhofer (2011): "Rethinking European Climate Change Policy," in Vicki L. Birchfield and John S. Duffield (2011): *Towards a Common European Union Energy Policy*. New York: Palgrave MacMillan.

Birchfield, Vicki L (2011): "The Role of EU Institutions in Energy Policy," in Vicki L. Birchfield and John S. Duffield (2011): *Towards a Common European Union Energy Policy*. New York: Palgrave MacMillan.

Egeberg, Morten (2004): *EU Institutions and the transformation of European-Level Politics – How to understand profound change (if it occurs).* ARENA Working Paper 19/2004. Oslo: Centre for European Studies, University of Oslo

Eggert, Haakan, Mads Greaker and Emily Potter (2010): *Policies for second generation biofuels. Current status and future challenges*. Report 24/2011. Oslo: Statistisk Sentralbyrå.

Eikeland, Per Ove (2005): *Biofuels – The New Oil for the Petroleum Industry?* FNI Report 15/2005. Oslo: Fridjof Nansens Institute.

Eur-Observer (2011): *Biofuels Barometer*. <http://www.eurobserv-er.org/pdf/biofuels_2011.pdf> [Downloaded: 21 of May 2012]

Eur-Observer (2007): *Biofuels Barometer*. <http://www.eurobserv-er.org/pdf/baro185.pdf > [Downloaded: 21 of May 2012]

Franco, Jennifer, Les Levidow, David Fig, Lucia Goldfarb, Mireille Hönicke and Maria Luisa Mendonça (2010): "Assumptions in the European Union biofuels policy: frictions with experiences in Germany, Brazil and Mosambique," *Journal of Peasant Studies* 37(4): 661-698.

George, Alexander L. and Andrew Bennet (2005): *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: Harvard University Press.

Gerring, John (2007): *Case Study Research. Principles and practices.* Cambridge, MA: Cambridge University Press.

Grønmo, Sigmund (2004*): Samfunnsvitenskapelige metoder*. Bergen: Fagbokforlaget.

Kerremans, Bart (1996): *Do Institutions Make a Difference? Non-Institutionalism, Neo-Institutionalism, and the Logic of Common Decision-Making in the European Union.* Governance: An International Journal of Policy and Administration. Vol. 9, No2, April 1996.

Krippendorff, Klaus (1980): *Content Analysis. An Introduction to Its Methodology*. Beverly Hills, CA: Sage.

Lenshow, Andrea (2005): "Environmental Policy. Contending Dynamics of Policy Change", in Helen Wallace, William Wallace and Mark A. Pollack (2005): *Policy Making in the European Union*. New York: Oxford University Press.

McCulloch, Garry (2004): *Documentary research in Education, History and Social Sciences.* London: Routledge Farmer.

Moravcsik, Andrew (1998): *The Choice for Europe. Social Purpose & State Power from Messina to Mastricht*. New York: Cornell University Press.

Nugent, Neill (2010): The Government and Politics of the European Union. New York: Palgrave MacMillan.

OECD-FAO (2011): "Chapter 3: Biofuels," in *OECD-FAO Agricultural Outlook 2011-2020*. <http://www.agri-outlook.org/dataoecd/23/56/48178823.pdf> [Downloaded: 20 of May 2012]

Olah, Geogre A., Alain Goeppert and G.K. Surya Prakash (2006): *Beyond Oil and Gas: The Methanol Economy*. Weinheim: WILEY-VCG Verlag.

Pahl, Greg (2005): *Biodiesel. Growing a New Energy Economy*. White River Junction, VT: Chelsea Green Publishing Company.

Parra, Francisco (2004): *Oil Politics A Modern History of Petroleum*. London: I. B. Tauris.

Peters, Guy B. (2005): *Institutional Theory in Political Science. The New Institutionalism*. London: Continuum.

Pierson, Paul (1996): "The Path to European Integration. A Historical Institutionalist Analysis," *Comparative Political Studies* 29(2): 123-163.

Powers, Susan E., Rosa Dominguez-Faus and Pedro J. J. Alvarez (2010): "The water footprint of the biofuels production in the USA," *Biofuels* 1(2): 255-260.

Roeder-Rynning, Christilla (2010): The Common Agricultural Policy. The Fortress Challenged, in Wallace, Helen, Mark A. Pollack and Alasdair R. Young (2010): *Policy-Making in the European Unio*n. Oxford: Oxford University Press.

Renner, Michael and Alice McKeown (2010): "Promise and pitfalls of biofuels jobs," *Biofuels* 1(1): 7-9.

Reuters (2010): *UPDATE 2 – EU report signals U-turn on biofuels target*. Online article: 25 of March 2010. <http://www.reuters.com/article/2010/03/25/eu-energy-biofuels-idUSLDE62O1UK20100325> [Downloaded: 20 of May 2012]

Rieger, Elmar (2005): "Agricultural Policy. Constrained Reforms" in Helen Wallace, William Wallace and Mark A. Pollack (2005): *Policy Making in the European Union*. New York: Oxford University Press.

Scragg, Alan (2009): *Biofuels. Production, application and development*. Cambridge: Cambridge University Press

Summaries of EU Legislation (2012a): *Glossary: White Paper*. <http://europa.eu/legislation_summaries/glossary/white_paper_en.htm> [Downloaded: 20 of May 2012]

Summaries of EU Legislation (2012b): *Glossary: Green Paper.* <http://europa.eu/legislation_summaries/glossary/green_paper_en.htm> [Downloaded: 20 of May 2012]

The Economist (2005): *Stirrings in the corn fields*. Online article: May 12th 2005. <http://www.economist.com/node/3960775> [Downloaded: 20 of May 2012]

The European Commission (2001d): *Transparency and access to documents.* <http://ec.europa.eu/transparency/access_documents/index_en.htm> [Downloaded: 20 of May 2012]

The European Commission (2011): *Application of EU-law. What is EU-law?* <http://ec.europa.eu/eu_law/introduction/treaty_en.htm> [Downloaded: 20 of May 2012]

The European Commission (2012): *"Health Check" of the Common Agricultural Policy.* <http://ec.europa.eu/agriculture/healthcheck/index_en.htm> [Downloaded: 20 of May 2012]

The Guardian (2011): *Biofuels are driving food prices higher.* Online article: 1 of June 2011. < http://www.guardian.co.uk/global-development/poverty-matters/2011/jun/01/biofuels-driving-food-prices-higher> [Downloaded: 20 of May 2012]

The United Nations (1992): *The United Nations Framework Convention on Climate Change*. <http://unfccc.int/resource/docs/convkp/conveng.pdf> [Downloaded: 20 of May 2012]

The United Nations (1998): *Kyoto Protocol to The United Nations Framework Convention on Climate Change*. < http://unfccc.int/resource/docs/convkp/kpeng.pdf> [Downloaded: 20 of May 2012]

Trèguer, David (2008): *Biofuel Policies and the reforms of the Common Agricultural Policy.* PhD Thesis. École Polytechnique.

Wiesenthal, Tobias, Guillaume Leduc, Panayotis Christidis, Burkhard Schade, Luc Pelkmans, Leen Govaerts and Panagiotis Georgopoulos (2009): "Biofuel Support Policies in Europe: Lessons learnt for the long way ahead," *Renewable and Sustainable Energy Reviews* 13(4): 789-800

Wilks, Stephen (2005): "Competition Policy. Challenge and Reform," in Helen Wallace, William Wallace and Mark A. Pollack (2005): *Policy Making in the European Union*. New York: Oxford University Press.

World Watch Institute (2007): *Biofuels for transport: global potential and implications for sustainable energy and agriculture*. London: Sterling VA.

Youngs, Richard (2011): "Foreign Policy and Energy Security: Markets, Pipelines and Politics," in Vicki L. Birchfield and John S. Duffield (2011): *Towards a Common European Union Energy Policy*. New York: Palgrave MacMillan.

Official EU Documents[4]

Committee of the Regions (2002): *Opinion of the Committee of the Regions on the Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of biofuels for transport.* Official Journal publication reference: OJ C 149, 21.6.2002, p. 7-10. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:149:0007:0010:EN:PDF> [Downloaded 21 of May 2012]

Committee of the Regions (2008): *Opinion of the Committee of the Regions on "Promotion of renewable Energy*." Official Journal publication reference: OJ C 325, 19.12.2008, p. 12-18. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:325:0012:0018:EN:PDF> [Downloaded: 21 of May 2012]

Newsroom of the European Union (2000): *Commission takes another look at French tax exemptions for biofuels*. Online article: 29 of November 2000. <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/00/1375> [Downloaded: 21 of May 2012]

The Council of the European Communities (1992): *Council Directive 92/81/EC of 19 October 1992 on the harmonization of the structures of excise duties on mineral oils*. Official Journal publication reference: OJ C 316, 31.10.1992, p. 12-15. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1992:316:0012:0015:EN:PDF> [Downloaded: 21 of May 2012]

The Council of the European Union (1994a): *Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change.* Official Journal publication reference: OJ L 33, 07.02.1994, p. 11-12. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994D0069:EN:HTML> [Downloaded: 21 of May 2012]

[4] Page numbers from the references in the text refer to the OJ-reference if this is provided.

The Council of the European Union (2002a): *Council Decision of 25 March 2002 authorising France to apply a differentiated rate of excise duty to biofuels in accordance with Article 8(4) of Directive 92/82/EEC.* Official Journal publication reference: OJ L 92, 09.04.2002, p. 22-25. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:092:0022:0025:EN:PDF> [Downloaded: 21 of May 2012]

The Council of the European Union (2002b): *Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations framework Convention on Climate Change and the joint fulfilment of commitments there under*. Official Journal publication reference: OJ L 130, 15.05.2002, p. 1-3. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002D0358:EN:HTML> [Downloaded: 21 of May 2012]

The Council of the European Union (2003b): *Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity*. Official Journal publication reference: OJ L 283, 31.10.2003, p. 51-70. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:283:0051:0070:EN:PDF> [Downloaded: 21 of May 2012]

The Council of the European Union (2003a): *Council Common Position (EC) No 1/2003 adopted by the Council on 18 November 2002 with a view to the adoption of a Directive 2003/…/EC of the European Parliament and of the Council of … on the promotion of the use of biofuels or other renewable fuels for transport.* Official Journal publication reference: OJ C 32, 11.02.2003, p. 1-8. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2003:032E:0001:0008:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1981): *Communication from the Commission to the Council: The Development of an Energy Strategy for the Community*. Natural number: COM(81)540 final. <http://aei.pitt.edu/1508/1/energy_30_May_COM_81_540.pdf> [Downloaded: 21 of May 2012]

The European Commission (1983a): *Energy and Energy Research in the Community. A Five-Year Programme of Action and its Financing*. Natural number: COM(83)315 final. <http://aei.pitt.edu/5880/1/5880.pdf > [Downloaded: 21 of May 2012]

The European Commission (1983b): *Community Energy Strategy: Progress and Guidelines for Future Action*. Natural number: COM(83)305 final. <http://aei.pitt.edu/4068/1/4068.pdf> [Downloaded: 21 of May 2012]

The European Commission (1992): *Proposal for a Council Directive on excise duties on motor fuels from agricultural sources*. Natural number: COM(92)36 final. Official Journal publication reference: OJ C 73, 24.3.1992, p. 6-7. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:1992:073:0006:0007:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1994a): *Amended proposal for a Council Directive on excise duties on motor fuels from agricultural sources*. Natural number: COM(1994)147 final. Official Journal publication reference: OJ C 209, 29.7.1994, p. 9-11. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:1994:209:0009:0011:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1997c): *Commission Decision of 18 December 1996 on tax exemptions for biofuels in France.* Natural number: 97/542/EC. Official Journal publication reference: OJ No L 222, 12.8.1997, p. 26-35. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1997:222:0026:0035:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1997b): *Energy for the Future: Renewable Sources of Energy. White Paper for Community Strategy and Action Plan.* Natural number: COM(97)599 final. < http://ec.europa.eu/energy/library/599fi_en.pdf> [Downloaded: 21 of May 2012]

The European Commission (1997a): *Proposal for a Council Directive Restructuring the Community Framework for the Taxation of Energy Products*. Natural number: COM(97)30 final. Official Journal publication reference: OJ C 139, 6.5.1997, p. 14-23. <http://eur-

lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:1997:0030:FIN:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1997d): *Communication from the Commission to the Council, the European parliament, the Economic and Social Committee and the Committee of the Regions: The Energy Dimension of Climate change.* Natural number: COM(1997)196 final. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:1997:0196:FIN:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1999a): *Withdrawal of Commission Proposals which are no longer topical*. Official Journal publication reference: OJ No C 235 18.8.1999 p. 2-13. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:1999:235:0002:0013:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (1999b): *Preparing for Implementation of the Kyoto Protocol. Commission Communication to the Council and the Parliament*. Natural number: COM(1999)230 final. < http://ec.europa.eu/environment/docum/pdf/99230_en.pdf> [Downloaded: 21 of May 2012]

The European Commission (2001a): *Communication from the Commission. A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development. (Commission`s proposal to the Gothenburg European council).* Natural number: COM(2001)264 final. < http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0264en01.pdf> [Downloaded: 21 of May 2012]

The European Commission (2001c): *Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions on alternative fuels for road transportation and on a set of measures to promote the use of biofuels. Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of biofuels for transport. Proposal for a Council Directive amending Directive 92/81/EEC with regard to the possibility of applying a reduced rate of excise duty on certain mineral oils containing buofuels and on biofuels*. Natural number: COM(2001)547 final. Official Journal publication reference: OJ C 103E, 30.4.2002, p. 205-207. <http://eur-

lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0547:FIN:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (2006b): *Communication from the Commission to the Council and the European Parliament. Biofuels Progress Report. Report on the progress made in the use of biofuels and other renewable fuels in the Member States in the European Union*. Natural number: COM(2006)845 final. <http://ec.europa.eu/energy/energy_policy/doc/07_biofuels_progress_report_en.pdf> [Downloaded: 21 of May 2012]

The European Commission (2006a): *Communication from the Commission. An EU Strategy for Biofuels*. Natural number: COM(2006)34 final. <http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0034en01.pdf> [Downloaded: 21 of May 2012]

The European Commission (2007): *Commission Decision of 23 October 2007 on the State aid C 30/2006 (ex N 367/05 and N623/05) which Italy is planning to implement as an amendment to an existing scheme for excise duty reductions for biofuels.* Official Journal publication reference: OJ L 65 8.3.2008, p. 11-17. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:065:0011:0017:EN:PDF> [Downloaded: 21 of May 2012]

The European Commission (2008b): *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. 20 20 by 2020. Europe's climate change opportunity.* Natural number: COM(2008)30 final. <http://www.energy.eu/directives/com2008_0030en01.pdf> [Downloaded: 21 of May 2012]

The European Court of First Instance (2000): *Judgement of the Court of First Instance of 27 September 2000 in Case T-184 /97: BP Chemicals Ltd v Commission of The European Communities.* Official Journal publication reference: OJ C 355 9.12.2000, p. 20. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2000:355:0020:0020:EN:PDF> [Downloaded: 21 of May 2012]

The European Economic and Social Committee (1992): *Opinion on the proposal for a Council Directive on excise duties on mineral oils from agricultural sources*. Official Journal publication reference: OJ No C 223 31.8.1992, p. 1. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:1992:223:0001:0005:EN:PDF> [Downloaded: 21 of May 2012]

The European Economic and Social Committee (2002): *Opinion of the European Economic and Social Committee on – the "Proposal for a Directive or the European Parliamend and of the Council on the promotion of te use of biofuels for transport", and – the "Proposal for a Council Directive amending Directive 92/81/EEC with regard to the possibility of applying a reduced rate of excise duty on certain minedal oils containing biofuels and on biofuels*. Official Journal publication reference: OJ No C 149 21.6.2002, p. 7-10. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:149:0007:0010:EN:PDF> [Downloaded: 21 of May 2012]

The European Economic and Social Committee (2008): *Opinion of the European Economic and Social Committee on the "Proposal for a Directive of the European Parliament and of the Council on the promotion of ther use of energy from renewable sources"* Official Journal publication reference: OJ No C 77 31.3.2009, p. 43-48. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:077:0043:0048:EN:PDF> [Downloaded: 21 of May 2012]

The European Parliament (1983): *Minutes of proceedings of the sitting of Friday, 11 March 1983*. Official Journal publication reference: OJ No C 96 11.4.1983, p. 89-123. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:1983:096:0089:0123:EN:PDF> Downloaded: 21 of May 2012]

The European Parliament (2002): *European Parliament legislative resolution on the proposal for a European Parliament and Council directive on the promotion of the use of biofuels for transport.* <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P5-TA-2002-0361#top> [Downloaded: 21 of May 2012]

The European Parliament (2008): *European Parliament legislative resolution of 17 December 2008 on the proposal for a directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources*. <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2008-0609&language=EN> [Downloaded: 21 of May 2012]

The European Parliament and the Council of the European Communities (1985): *Council Directive 85/356/EEC on crude-oil savings through substitute fuel components in petrol*. Official Journal publication reference: OJ No L 334 12.12.1985, p. 20-22. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1985:334:0020:0022:EN:PDF> [Downloaded: 21 of May 2012]

The European Parliament and the Council of the European Union (2003a): *Directive 2003/17/EC of the European Parliament and of the Council of 3 March 2003 amending Directive 98/70/EC relating to the quality of petrol and diesel*. Official Journal publication reference: OJ No L 76 22.3.2003, p. 10-19. <http://www.cen.eu/cen/Sectors/Sectors/Chemical/Documents/200317EC.pdf> [Downloaded: 21 of May 2012]

The European Parliament and the Council of the European Union (2003b): *Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels and other renewable fuels for transport.* Official Journal publication reference: OJ No L 123 17.5.2003, p. 42-46. < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:123:0042:0042:EN:PDF> [Downloaded: 21 of May 2012]

The European Parliament and the Council of the European Union (2009a): *Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*. Official Journal publication reference: OJ No L 140 5.6.2009, p. 16-62. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=Oj:L:2009:140:0016:0062:en:PDF> [Downloaded: 21 of May 2012]